

ENVISIONING THE FUTURE VILLAGE: THE ROLE OF DIGITAL TECHNOLOGY IN SUPPORTING MORE INCLUSIVE VISIONS IN THE NEIGHBOURHOOD PLANNING PROCESS

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Abstract

This thesis presents the development of a digitally aided Collaborative Envisioning Framework, to support disenfranchised young people in contributing to a 'shared vision' of their community's future. Drawing from the research areas of planning, design, collaboration and envisioning, this study sought to address the existing democratic deficit in local decision making activities, by utilising the new potentials of digital technologies.

The research aim was to support communities, particularly disengaged young people, in becoming involved with decision-making activities, namely generating a shared vision for a neighbourhood plan. Since the radical policy changes to the National Planning Policy Framework and Localism Act 2011, members of the public have been handed increased responsibility and accountability in contributing to the local decisions affecting them. However, the tools and resources have been criticized for not engaging and including all sectors of the public, particularly young people (who arguably have the most to gain, or lose, as a result of decisions made).

Using community and neighbourhood planning as a microcosm of a larger problem, this study looked towards the potentials of digital tools as a way to address this democratic deficit. To discover whether they offered anything more than existing tools, by helping young people to contribute to the generation of a 'shared vision' (a requisite of a neighbourhood planning application). It also addressed the assumption that the public had an understanding of what creating a 'shared vision' entailed, and had the skills and knowledge required to create one. It firstly identified envisioning as a design activity, which needs creativity, imagination, empathy, collaboration, communication and deliberation, and then identified 'designable factors' such as processes, tools (digital and non-digital), environments, and services which are able to support these, focusing on which were most suitable for the young audience. The research also explored behavior and motivation theories which guided the design of an envisioning framework.

To achieve this aim, a constructive design research methodology was adopted consisting of a designed artefact - 'The Collaborative Envisioning Framework' which was utilised throughout numerous workshops. The interactions between the workshop participants and the envisioning framework generated multiple sets of qualitative data, which were analysed and interpreted to form the next iteration of the framework. The research demonstrates that existing tools and resources aimed at supporting inclusivity and meaningful visions for neighbourhood plans are not, in their current form, adequate to firstly, engage the diverse

groups of people they should be including, and secondly, to support a generative, creative activity of envisioning, and suggests that the use of digital tools (namely Ageing Booth App, Morfo App, and Minecraft) offer something new.

The original contributions to knowledge are: an advancement of constructive design research methodology; contributions to the discourse surrounding the purpose and value of visions within community planning; and a practical 'Collaborative Envisioning Framework' which can be followed by public sector and private organisations who seek to support communities in producing 'visions' for their community.

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Declaration

I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree, and does not incorporate any material already submitted for a degree.

Signed:

Dated:

Chapter 1: Introduction

1.1 Context

Create a shared vision: this is the request being asked of communities in relation to developing a neighbourhood plan, the latest ‘tool’ implemented by the previous Coalition Government, and carried on by the current government, to support citizens in having a more empowered role in the future planning decisions that will affect the villages, towns and parishes in which they live. Neighbourhood planning was introduced as part of the Localism Act 2011, an agenda passed in response to the dissatisfaction with the existing means and opportunities people felt they had to engage with and have an influence on local decision making processes. In the independent Power Enquiry, commissioned by the Joseph Rowntree Foundation in 2006 (Power Enquiry, 2006) it was found that only one in five Britons were satisfied with the ability that they had to engage in local decision making, suggesting that the desire to engage is there but that the appropriate means of doing so may not be. This lack of involvement is further identified in the 2008 report ‘Democratising Engagement’ (Cornwall, 2008), which found that, despite claiming they want to be involved, on average people are less likely to vote, join political parties or participate in local politics than 30 years ago. This suggests that, amongst other barriers, the way through which citizens are being asked to contribute is no longer suitable. According to the case study produced by Gunn, Brooks and Vigor (2013: p.148), neighbourhood planning has still not resolved this issue: “in relation to the nature of the task to be achieved, the neighbourhood initiative requires a disproportionate level of community commitment”, implying that the current level of work, time, commitment, presence and participation required by individuals within the community is not worth the effort. This begs questions about why this task is so complicated and what can be done to address it?

What the ‘Power to the People’ report (2006) found was that, contrary to popular belief, disengagement was not caused by an apathetic and uninterested public nor lack of time on the part of the citizens, but that “citizens do not feel that the processes of formal democracy offer them enough influence over political decisions” and that “many people feel like they lack information or knowledge about formal politics” (2006, p17). Coleman and Firmstone (2014), identify this lack of communication and understanding between councils and their public as a result of the limited knowledge councils have around what is considered useful for ‘public engagement’. Stressing that councils need to reconsider the ways in which knowledge is produced and expressed locally, and not rely on the approach of gathering already engaged

citizens around a singular institutional centre, which simply attracts the ‘usual suspects’. They argue in favour of a move to more accessible forms of conversation, where people can ‘speak in ways that are inflected by local knowledge and not institutional jargon’. Identifying the need for new forms of engaging and working within the public, as ‘public engagement work has now become more important than ever before, but that the resources to make it effective and the incentives to make it appealing to citizens are more scarce than they had been in the past’ (ibid, p840). Of course, in some cases the issue of apathy will affect whether people want to participate, and there are perhaps more pragmatic factors concerning time or practicality, such as community members with full time jobs or young families to look after being unable to attend the traditional meeting setting. Could it also be that people do not currently feel comfortable with speaking out in groups, or that they feel they do not have the ability to articulate their ideas as well as others can? Is it that people simply are not aware that they have the right to contribute, or do not feel they have anything of value to offer in terms of shaping a vision for the future of where they live? Whatever the reason, the overarching point is that all those who want to participate, should be aware they can and be supported in doing so.

In addressing this issue, the new Neighbourhood Plans (NP) brought into being by the Localism Act 2011 “will set a vision for the future” (DCLG 2011, p2). Through the Neighbourhood Planning process, residents are being asked to **create a ‘shared vision for their neighbourhood’** (DCLG, 2012, p43) that will inform the future development of their community. It is from this ‘shared vision’ that future planning policies and decisions will be based. While attempting to address the existing concerns about the disconnection between communities and the planning decisions that affect them, there appear to be several issues with this intervention: first is the assumption that community members have the **latent willingness and capacity** to engage in the creation of a vision and that these required capacities can be gained or developed. What creative capacity is required to produce a vision? The second issue is ambiguity around the term ‘vision’ which, despite its repeated use in neighbourhood and community planning literature and processes, remains a vague task that is open to interpretation. What is a vision, what is the process for a community to create a vision, what is the ‘added value’ of its creation in terms of planning? It is also often referred to as a ‘shared vision’ or the ‘community’s vision’ indicating that it is not an individual task, but one which requires the contribution from, or at least represents, the entire community. This leads to the third issue, surrounding who is involved in the creation of a vision. The Intergenerational Foundation (IF) paper ‘How the Localism Act Hands Power to Older Residents’, argues that the whole system of Localism rests on the flawed assumption that decisions made at local level are inherently more democratic than those made

centrally, when most local councils are predominantly made up of a “narrow elite, which is older, masculine, and wealthier than the people it is meant to represent” (Leach and Kingman, 2012, 24). The IF paper also identified that despite 32% of England's population being under 35 years old, this age group makes up only 5% of parish or town councils, whereas the over 65's make up only 20% of the population but 40% of town councils, demonstrating a clear misrepresentation and implying that the democratic deficit remains intact despite agenda reforms.

The role and potential of digital technology is increasing, with reports suggesting that rather than being another way to do the same thing, digital technology could potentially change the way people learn and perform tasks (Khaddage and Knezek, 2012), in both creative and communicatory activities. With regard to the former, Jenson (2012) believes “Media are new institutions to think with” (p16), suggesting that digital technologies offer up new ways of thinking, creating new ‘spaces’ for conversation and collaborations and potentially effecting cognitive processes. Such technologies could have much potential when considering the generation of a ‘vision’; indeed, they may provide something quite different from that achieved through current processes. With regard to being tools of communication, Clay Shirky (2008) views digital technology as a means of providing new opportunities to draw on the knowledge possessed by citizens, which can enable a new ‘open source’ world in a way that could never have been done before, a view mirrored by Leadbeater (2007). The UK government considers digital technologies to be responsible for “spreading information and decentralising power like never seen before” (Gov.uk 2010). This suggests that it is a medium to include more people, although questions remain about which people are included and in what ways are they able to contribute. It is also suggested that technology is leading a movement away from passive experience into an interactive social one, that is enabling, sharing, collaborative and with a global membership (Srinivasan, 2008). Current research being carried out by The Centre for Technology Research recognises the importance of bringing technologies into the political process with Open Government being explained as a “new model of government only made possible by the Internet age” (CTRP, 2010, p2). This harnesses the popular view that younger generations, who are currently underrepresented within the political arena, are often described as digitally native (in that they have always been surrounded by digital tools and have used them to carry out daily tasks) are feeling disengaged, disillusioned and isolated from the political process. Open government with its principles of transparency, participation and collaboration, seeks to “reconnect and revitalise the UK’s democracy and the way in which government and citizens interact.” (CTRP, 2010, p2), meaning that Government aims to adapt

to the ways and means of interaction and communication that embraces the habits currently used by the citizens to encourage, engage and enable people using the devices and technologies they are comfortable with. In its most recent manifesto the Conservative Party stated that it would be “moving more services online” (Conservative manifesto, 2015, p47) signifying a shift in the way participatory political activities will be carried out in the future.

1.2 The problem and aim

Since the enactment of the Localism Act 2011, citizens have an increased role/responsibility in contributing to the land use planning decisions affecting them, with the Localism Act setting out its aim of shifting to a more ‘participatory democracy’, particularly with regard to the future development of villages, towns or neighbourhoods. Yet arguments persist that previous planning processes have not succeeded in engaging with the public, nor in truly ceding power to those it has tried to include (Doak and Parker, 2005). Even within the introduction of neighbourhood planning, citizens still don’t have, or are not provided with, the tools which support their ability or provide them with the opportunity to engage. Indeed, even the pilot studies conducted ahead of the Act criticised the Neighbourhood Planning process for its ‘light touch’ approach, whereby citizens had to go through a series of uncertain, arduous and potentially contentious stages in order to achieve quite particular strategic outcomes. Yet its statutory status, which carries a level of legal autonomy for communities that has been lacking in other planning processes is why it has taken focus in this research. What is significant about ‘Neighbourhood Plans’ is that the onus lies with the communities themselves: communities that wish to initiate and produce their own plans can do so with the assistance of their local authority, and not the other way round as it used to be. However, current practices and interventions do not appear to be supporting these new opportunities available to communities. There appears to be a lack of understanding surrounding envisioning, the role that it has in planning, and how people create a vision, particularly a shared vision. The symptoms of the lack of understanding or ability can arguably be seen in the lack of **inclusion, engagement, creativity and collaboration** within the existing structures and systems; structures and systems which have not been designed to include or represent everyone in communities in contributing towards the decision making processes that affect their lives. Communities are now told that they have the right to create and help shape their environments, but by merely changing legislation that gives people the right to do this does not necessarily mean that people will suddenly have the ability, opportunity or capacity. The

decision making bodies such as the parish councils, whose average age is 60 (Leach and Kingman, 2012), may not share the same concerns or problems as faced by younger generations (or vice versa) and are often in favour of maintaining the status quo (Leach and Kingman, 2012). This means that certain views may remain unrepresented and the existing democratic deficit continues. Can an intervention be designed to address this, and could digital technologies hold the potential to address this problem by offering something new in the way of the processes and approaches that can be facilitated, or even provide a new way to converse and deliberate that people may engage with more positively?

The aim of this research therefore is to address the problem outlined above. In particular, it seeks to examine the potential of digital technologies to aid community engagement, in particular the underrepresented youth and understand whether a designed intervention benefits from being digitally supported. Guided by the findings of the 'Democratising Engagement' report, which suggests that to encourage people to contribute in shared decision making processes it is necessary to engage them in their everyday habits via new, interesting and creative methods; this research seeks to catalyse a radical shift in local planning that extends beyond the ballot box and into the everyday spaces of everyday lives (Cornwall, 2008, p12). Although digital technology provides a new space and new potentials to engage and to create, it is not to claim that by simply incorporating technology into community projects the problem will be solved. Many citizens do not communicate, interact, understand or even have access to either digital technologies or the internet. The question is not whether replacing current processes with digital tools will improve the system, but whether the **addition** of digital tools can assist more of those whose views are not currently being represented by traditional methods, particularly when considering unrepresented youth, and therefore enable more citizens to contribute to the creation of a shared vision by providing the process, opportunity, ability, space and platform to do so. Political theorist John Dryzek argues that to achieve this democratisation or inclusiveness requires an extension across three dimensions: "franchise, the number of people capable of participating effectively in collective decision making.... Scope, bringing more issues and areas of life potentially under democratic control.... Authenticity of the control, to be real rather than symbolic, involving the effective participation of autonomous and competent actors" (Dryzek, 2000). This research looks into whether digital tools can support any or all of these dimensions. As stated by Cornwall (2008), if the skills to participate are just that, then these skills will need to be acquired by people in order for them to engage in a public arena; skills such as the ability to communicate, articulate and deliberate. Being able to exchange reasons, views, information and evidence, in order for people to listen and

contribute their view, and reflect on the views of others so they are able to broaden their understanding of the situation in order to produce fresh collaborative ideas on an issue. This research has been carried out using the area of community planning as a microcosm emblematic of a larger issue of inclusive public decision making processes. Planning has been selected due to the once in a lifetime policy changes within the domain that potentially offer space to make more meaningful contributions. This research seeks to understand whether it is possible to design a digital intervention, which leads to a more inclusive, engaging, creative and collaborative envisioning process than that which currently exists. A process which engages those members of the community currently unrepresented, one which provides people with a greater understanding of the purpose of a vision and how to produce one collectively.

This thesis argues that the design and use of a digital envisioning tool or process has the potential to address the democratic deficiencies inherent in current approaches to community-based land use planning.

This study has been carried out with a collaborating body, Action in Rural Sussex (AirS). AirS is a rural community council based in Lewes, East Sussex, which provides practical help and support to communities across rural Sussex enabling them to be vibrant living and working places, assisting in identifying challenges faced by individuals and communities and championing their needs with policy and decision makers. Established in 1931, AirS holds a wealth of experience and knowledge surrounding community and Neighbourhood Planning. Through working with AirS, the opportunity to engage with communities undertaking neighbourhood plans, and community plans was available, assisting the practical elements of the research and also provided a means of evaluation and assessment. AirS also works with Community 21, a social enterprise linked to the University of Brighton which is developing online tools to assist communities in the democratic planning and neighbourhood development processes as an ongoing project. Community 21 is developing the platform being rolled out for use by rural community councils such as AirS and the communities themselves. It is the work of Community 21 and Action in Rural Sussex that this research will be building upon, namely the Future Village project (Gant and Ganderton 2011) carried out in 2011, whereby young rural community residents worked with Brighton University students to create visions for their village 50 years in the future. Building upon the findings of the Future Village project sees a continuation of young people being the focus of the study (having been identified as a disengaged demographic), as well as informing methodological approaches used. The outputs of this research will be disseminated through the Community 21 platform, which in turn will be utilised by AirS and

other practices. One of these other practices includes Block Builders, a social enterprise seeking to engage young people in decisions that affect them, whose founders assisted with numerous workshops and utilise methods and elements generated during the research in their current practices.

Previous research by Community 21 is not the only reason to focus on young disengaged youths. Children and young people are often considered at the periphery of the community engagement; seen as an extension of the adults in their lives, adults who are assumed to somehow represent their needs and desires. The inclusion of the young is often limited to specific issues: playground design, locations of skate parks, youth services (O'Brien & Moules, 2007; Speak, 2000) and the idea that they have interests in broader neighbourhood issues (i.e. access to employment, the form of the built environment, maintenance and rubbish removal, the location of services, violence, homelessness, transport, etc.) is often overlooked. The ways in which community engagement is currently undertaken also leans towards adult skills, resources, relationships and opportunities, meaning there are few dedicated resources for young people. Speak (2000) argues that engaging young people is vital "for sustained community ownership of community regeneration initiatives and the development of new forms of community governance" (Speak, 2000, p. 32). Goodwin and Young found that young people were able to provide important suggestions for change in their communities, having important contributions to make to community development efforts and see themselves as experts on the neighbourhoods (Barnett & Brennan, 2006; Black, 2011; Brennan & Barnett, 2009; Speak, 2000). In short, neighbourhood community development needs to involve and reflect the perspectives of the full range of ages of its residents and it is important to find a way of including young people, via appropriate means and in a manner that sees their perspectives as a viewpoint that is relevant now.

It is argued that the findings of the research could hold some real practical value in supporting those wanting to have a say in shaping their neighbourhoods, and for practitioners (such as rural community councils) wanting to reach out to disenfranchised groups via alternative, more inclusive methods; as well as adding to the conversation around meaningful public engagement tools and processes. This thesis also adds to the larger conversation surrounding the value of Design Research as a meaningful mode of investigation and how its utilisation can contribute to knowledge generation. It also contributes to the conversation around the value and generation of visions within community planning.

Chapter 2: Literature Review

2.1 Structure of Chapter

The purpose of this chapter is to establish the boundaries of what is currently known and unknown regarding how the design of an intervention can support a more inclusive purposeful envisioning process within the context of community planning and specifically Neighbourhood Planning. It is considered that this research stands at the intersection of several domain conversations (Fig 1), namely: Community Planning, Design Theory, Behavioural Change Theory, and the role Digital Technology plays throughout these discourses.

These domains were selected following an exploration into Neighbourhood Planning, focusing on: what the current practice was, what community members were being asked to do and how they were being asked to do it. This led to a focus on the consistent reference to ‘envisioning’ and the production of a shared ‘vision’, a term mentioned repeatedly in the planning literature, yet without a definitive explanation of how it is used. Through exploration into the notional production of ‘visions’ and the act of ‘envisioning’ the processes were presented as issues of creativity and design; communities’ were being asked to undertake a design process, therefore design approaches and what it means to ‘think like a designer’ were explored. In order to gain a greater understanding about how and why communities might want to undertake this task, behaviour literature, specifically in relation to design were looked at. As the thesis sets out digital technology could potentially provide an answer to this, it is referred to (in relevance to the literature) throughout.

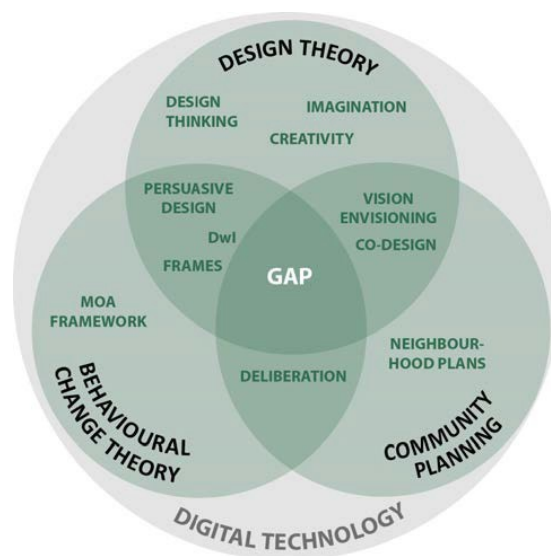


Fig. 1 Theoretical position of research; Duggan, K. 2016

The structure of the literature review will begin with '**Visions and Envisioning**', exploring the purpose and value of creating a vision and a shared vision in relation to community planning and uncovering the existing tools, resources, processes and practices used to achieve this; focusing on how they are constructed and who they are constructed by, the current criticisms to their use and barriers which impede their creation.

Due to the creative and design based nature of visions, the area of 'Design Thinking was explored to understand whether it was possible to facilitate a design based process of envisioning. It also explores more closely the roles of creativity, imagination and lateral thinking within design and envisioning, as well as identifying the gaps surrounding how a collaborative creativity process could be stimulated and facilitated by which approaches (i.e. framing). Due to the discursive nature of collaborative creativity, methods that are considered to support groups to communicate and discuss creative ideas such as distributed cognition and externalisations were also investigated, leading into a conversation surrounding **deliberation**. This section focuses on whether deliberation can lead to consensus and what the role of social learning and decision-making moments is in achieving this. It also considers the current role and trends in technologies in deliberation and collaborative creation.

The practices of Participatory Design and Co-design are then identified for their inclusive, generative and deliberative approach to problem solving, outlining the current methods of how individuals can work together. The areas of Persuasive Design and Design with Intent are also explored to understand how theories suggest designers are often now playing the role of facilitator within these processes, in which they design activities that shape how the user interacts with a situation and arguably then, play a role in shaping the outcome.

Following this argument that designers are involved in the area of behaviours, **behavioural Change theory** is then explored. Using the frameworks of MOA (Motivation, Opportunity and Ability) the chapter considers how the design of a tool addresses these areas cognitively. This section also addresses the ethical implications that exist when aiming to create tools that seek to influence behaviour. This section links back to neighbourhood planning and considers the capacities (cognitive and otherwise) which affect a community's ability to participate in decision making processes and looks collectively at the requirements alongside the creative and behavioural change elements discussed throughout the literature review in order to contextualise the discussion, it is also discussed in order to establish the areas which are not currently being supported by the existing systems.

At this point the **synthesis** is compiled, synthesising the key theories and ideas discovered throughout the literature review, as a means of identifying the gaps in knowledge that need to be addressed. The final section lists the research question which will address these gaps.

2.2 Vision and Envisioning

Visions, and the practice of envisioning, exist within a variety of diverse contexts and there are considered to be seven versions of visions: religious, political, humanistic, business, community, policy and personal (Van der Helm, 2009). Although used in different circumstances and for different purposes, Van der Helm argues that each vision shares three aspects: the future, the ideal and the desire for deliberate change (ibid). By way of being future set, they mainly refer to something that does not yet exist, an idealised future. In terms of being ideal, this is seen in contrast to being utopian, which focuses on the best (im)possible world, whereas visions search for futures seen or conceived as ideal, often respecting contextual and historical contingencies – that is – not best, but better. They hold within them a desire for deliberate change, these visions help converge actions into a desired direction no matter whether business performance or achieving a sustainable world, rallying votes or developing a community - the vision is there to generate change – it is transformational. With the term ‘vision’ being used so widely its meaning changes depending on the different discipline or context within which it is used, therefore a reluctance to conform to one interpretation exists. However, Van der Helm offers a definition that is appropriate for this research when he argues that a vision is **“more or less an explicit claim or expression of a future that is idealised in order to mobilise present potential more into the direction of this future”** (100). The use of the term ‘explicit’ in this definition identifies the role and importance of being able to communicate the ideals of the vision in a way that people will understand them. There is no suggestion of what media these expressions take, rather that they have to be unambiguous in their intention. Within the literature visions are often associated with Future Studies yet they arguably differ greatly. Visions do not explore the many alternate futures or possible futures in order to make predictions for the future; visions are transitional, actionable, and in many ways less open than Future Studies. Visions have a specific direction, that is, a hope and an idealised singular ‘better’ place to aim for in order to trigger change formed by what should be and could be rather than what will likely happen if we continue on our current trajectory. Bell and Mau (1971) believe that the way we understand the future has altered: ideas have shifted from notions of destiny or fate of the gods into a matter of human activism and the responsibility of many individuals, meaning the future is now something people can shape and a vision is a way to action this change. A vision in this sense seeks to **influence** human thinking and behaviour.

How a vision achieves this in practice is understood far less than how a vision is created; it is often aiming for something different to what currently exists yet realising this vision is not a set plan of actions, but often a more slow moving incremental change. As Van der Helm states “Being visionary does not necessarily mean releasing rapid change, but realising change into a desired direction through the development, concretisation and materialisation of transformational ideas.” He therefore argues that what is communicated is often not the vision itself but **communicable representations of ideas**, and this more or less explicit representation is what we can discuss, debate, accept or reject. In terms of the speed of a vision becoming realised, this would surely be dictated in part by the time scale of the ‘thing’ that was being envisioned, i.e. if it was a vision for a month, a year, 5 years, 20 years, etc.; the rate of change and what was sought to be achieved would differ. The importance of envisioning is not in the ‘product’ of the ‘vision’ alone, but the way in which it is created, delivered and the ability people have to understand and interact with it and find it aspirational. This view is supported by Westly and Mintzberg (1989) when they state “A vision, that is, its transformational tension, does only really originate in the encounter between what is emitted and what is perceived.” The term ‘tension’ here suggests that a vision will be perceived in different ways by different people, the tension that is created is the discussion born from firstly, what people understand from what is being emitted (i.e. proposed) in what context and secondly, whether or not they agree with it.

Yet what is the value of visions, in either the ‘product’ or the tensions they cause? In the realms of business and visionary management it is suggested that visions lead to stronger motivation, more inspiration and greater focus on direction. It is suggested that a clear precise vision can encourage people to stretch more, by enabling them to put their actions into the context of goals that they care about (Shapiro, 1996). Along with being motivational they need to be inspirational and carry the message that transformation or change is possible by using the tension between ‘what is’ and ‘what could be’, creating a mental framework through which potential actions can be evaluated, accepted or rejected, but differing from goals or plans as they are not a rationalised structured pathway which describes how and what to do to make the vision a reality. Fred Polak (1961) describes visions as ‘magnets’ in that they are an attractive force, which pulls the present towards the envisioned future that they communicate. Yet it is clear that metaphors used as a framework are not enough without the transformational or creative tensions: a magnet will not have a function without the contrast of the past or present (Weisbord and Janoff, 2000).

Etymologically, 'vision' is rooted in the faculty of seeing and could be applied to what is generally called 'a view', be that a world-view or perspective i.e. a point of view. However, within this research the term 'vision' is concerned with those that are future set, although they will relate to elements of one's worldview, it focuses on those things that do not yet exist. As Van der Helm points out **"More often than not [there is] neither a theory explaining the appropriateness of the vision, nor a clear methodology that has led to the vision."**

2.3 Vision and envisioning in Neighbourhood planning

Gaffikin and Sterrett trace the *obligation* of local authorities to derive planning strategy from shared visions back to the Local Government Act 2000, in which there was an emerging agenda to modernise planning and emphasise a more integrated participatory practice (Gaffikin and Sterrett, 2006). According to their review, Gaffikin and Sterrett argue that 'vision' planning is premised on the idea that the best way to 'predict a more uncertain future is to have the inventiveness and reflexivity to create it', in which visioning is about thinking in the future tense favouring risk-taking and improvisation over the bureaucratic and routine (Wacker et al., 2000). It involves the creation of a widely agreed view of where the community wants to be in two decades or so, generated from explicit discourse around concepts, values and principles, formed from inclusive engagement across the diverse stakeholders who live in these specific areas (Vigar et al, 2000). As expressed by Klein et al. (1993, p. 10): "Proponents of visioning believe that plans that resonate with citizen's deepest aspirations and values have the best chance of being implemented". They also argue most people involved in planning consultation exercises and in public inquiries have a narrow interest in land and building development, and usually fall into two camps: those who want to secure development potential and those who are opposed to particular developments. The use of visioning potentially offers an opportunity to widen and deepen participation beyond this adversarial dialogue.

The problem though, is that the term 'vision' can (and is) applied loosely and conveniently to legitimize plans as creative, innovative and consensual (Albery, 1992), where missions, aims and objectives of a conventional strategic plan are all simply prefaced with the term 'vision' (Gaffikin and Sterrett, 2006). Peter Senge (Senge et al, 2005) and Wendy Sarkissian (2010), planning practitioners and academics, also state that despite 'visioning' being an established part of the practical planning process there is no definitive or clear meaning for what it entails and what value it has. Senge uses concept of captive tension to describe the value of visions. In his 1990 book *The Fifth Discipline* he states "The juxtaposition of vision (what we want) and a clear picture of current reality (where we are relative to what we want) generates what we call

'creative tension'; a force to bring them together, caused by the natural tendency of tension to seek resolution" (1999, 142), supporting the old adage 'If you don't know where you are going, you probably will end up somewhere else.' However, this purpose of vision is not coherently shared across the planning domain; during a group discussion of 'visioning' at a planning event, Sarkissian noted that the contributors were "all talking about different things" (2010, p40) in relation to what they perceived the practice of 'visioning' to be. This view endorses the extensive research carried out by Robert Shipley (2002), which found that there are as many as 20 different meanings for 'visioning' within planning literature. Shipley noted that the terms vision and goal are used interchangeably within the practice and are often confused with the term 'mission'. Despite this, Shipley (2001) considers the creation of a vision as an approach which research had suggested was successful in involving more people than other methods of participatory planning, and found the notion of clear visions serve as effective motivators of action. In their review of 120 communities who had undertaken a neighbourhood plan, Parker et al (2015) found that the theme of shaping a local vision was raised throughout the responses and was more prominent than shaping specific projects or land use policies. This indicates the idea of generating a 'vision' may be more accessible an idea to become involved in, than that of the technical planning language of policies.

However, there is skepticism around the ability to reach a consensus on a vision in towns, villages or communities with social (and in some cases, ethnic) stratification, and others argue that whatever consensus can be forged is likely to be a bland lowest common denominator. Shipley also states there was little evidence that participating in goal setting, or the creation of a vision, strengthened people's commitment to achieving these goals, contradicting Senge's 'captive tension' concept. A key concern of Shipley was whether a common vision is even possible in the complex community setting. In relation to the statement "All people are equally capable of creating future images..."

psychological research indicates that the ability to create future visions is not universal and suggests that not all people think about the future in the same way. To assume that they do, to design programs on that basis, and to expect them to participate in the same way may in itself not serve democratic or good planning principles. This is particularly pertinent when focusing on young people and the ways and means in which they are able to think about the future, and how others members of the community will perceive it.

Yet, despite this criticism and ambiguity, the obligatory or suggested use of creating visions/shared visions/overall visions are continually referred to within community planning literature, with the citizens being tasked to produce them, as is highlighted in

Table 1. which details the existing uses of the term 'vision' in planning guides and literature (additional examples can be found in appendix A).

Organisation	Use of the term 'Vision'
Government: Department of Communities and LG (DCLG)	A neighbourhood plan"reduces red tape, making it easier for authorities to get on with the job of working with local people to draw up a vision for their area's future" from A Plain English Guide to Localism (DCLG, 2011, p18)
Locality	<p>"The Neighbourhood Plan can set out the community's overall vision for the area and should include overall aims for its future development and growth" from Locality Guide to Neighbourhood Planning, p10</p> <p>"The purpose of the first stages of community engagement is to help define issues and aims for the plan, and to inform an overall vision and to start to create a sense of wider ownership for the plan" from Locality Guide to Neighbourhood Planning, p8</p>

Table 1. The use of the term 'vision' by community planning organisations

The current use for a vision as set out in Neighbourhood Plans guides can be seen in the image below (Fig. 2), adapted from Planning Aid England (RTPI). This image clearly sets out that a vision will play a vital role in the creation of policies. Through the vision several topics of interest or concern are identified which lead to the formation of the objectives, which in turn set out the policies for future planning activities in that area.

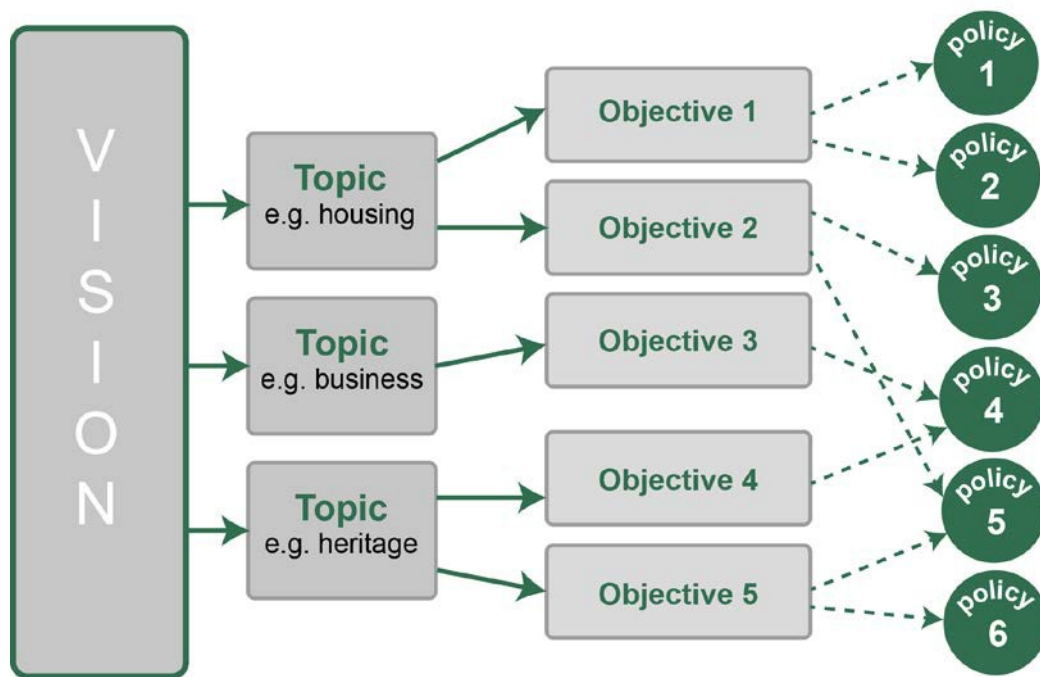


Fig. 2 Adapted from Planning Aid Developing a vision and objectives (no date) diagram

Within community planning Hanzl (2007), mirroring the purpose of a vision outlined in fig. 2, believes that the role of forming a coherent vision is to create the thing that “precedes the changes”, describing it as the “representation of the citizens’ minds that plays an essential role in reshaping the real space” (p289). This suggests that it is necessary in the early stages of planning, in order for people to consider **how** and **why** they want their physical environment to change and what it should and could be. The terms ‘vision’ or ‘shared vision’ are mentioned repeatedly through the works of many community planners, both in practical and theoretical writings (Wates, 2008; Sarkissian & Hurford, 2010; Shipley & Newkirk, 1999). The terms are also referred to in the practical resources, guides and handbooks of community support organisations (Locality 2013, The Princes Foundation, and Planning for Real) as a starting point for the community planning process. For Locality, the leading nationwide network for community-led organisations which promotes and supports social action within communities, it is described in their Neighbourhood Planning Roadmap (Locality 2014) as “putting in place a vision” and involves “the views, aspirations, wants, needs of local people”, indicating, and

supporting Van der Helm's view that it is very much a future based activity, but does not clarify how this process is carried out - either in the way in which numerous views of citizens can become a shared vision, or through what medium it is represented. Despite its continual presence in the literature and practical guides, there remains little clarification of the theoretical reasoning behind why it is such a necessary activity, and little instruction regarding the process or approach to how to produce a 'vision' - less still on producing a shared vision representative of the community in question.

Referring again to Sarkissian, visioning is "something visionary – out of the present – not ordinary reality", and something different to that of strategic visioning, as she articulates: "Martin Luther King did not say, 'I have a strategic vision'. He said 'I have a dream'" (p43). In Sarkissian's terms a 'strategic vision' is a plan or 'Path of Explanation' where the focus is to reach clarity and move forward efficiently. Whereas a 'vision' is a 'Path of Expression' where the aim is to go deep and reach an understanding of what is going on with depth "which is about storytelling, imagination and creativity". She recognises it as a right brain activity that forces people to break out of their analytic thinking and by doing so, will reach an understanding of a situation that is not possible via rational thought. Ziegler (1996) goes beyond this into a more tacit understanding, stating a vision is an expression of our spirit - not knowledge, wishes or goals, and only through teasing out the inner work will you discern and generate images of the future that lead to transformation through a commitment to new action illuminated by that vision (Ziegler, 1996, p10).

This highlights the relationship between envisioning and vision, where envisioning appears to be referred to as the internal activity that a person or group performs in order to produce 'a vision', which can be seen as the external representation which articulates and represents the inner process. The 'inner work', according to Zeigler is deep imaging (eliciting images of the future), deep listening (listening to yourself and to others with silence, attention, empathy and without judgement) and deep questioning (regarding what should change, and why, and how). The notion of spirit is also used by Otto Scharmer (2007) and colleagues who developed Theory U, which argued that we need to extend our ways of operating to include **empathic and generative listening**, which involves putting yourself into the place of another person in order to understand the views of others, and using these in order to create alternative visions of your own. Shipley's research however, concluded in a far more pragmatic understanding, by arguing that envisioning and community envisioning are 'part strategic planning, part participation and part public motivation' (Shipley 2002, p11).

Of the current guides that do exist around envisioning processes, there appear to be a similarity within the different stages. Envisioning, according to Lachapelle et al (2011), involves community members discussing past and present issues in order to determine positive qualities and assets, identify future goals, design a plan for the community, carry out a series of actions to implement the plan and then evaluate the outcomes through a collective dialogue and reflection process. Lachapelle believes the benefits include: giving members the opportunity to explore new ideas and lay out options, discover creative and innovative ideas; develop a shared community plan for the future; and collectively identify and analyse what is important in the future. Big Local (2012) follows a similar process by asking 'where are we now?' and noting the importance of understanding an area by identifying strengths and weaknesses, and encouraging ideation (the formation of ideas) by engaging people through different activities. Similar processes are detailed in the community planning manuals of Wates (2008) and also upon the Department of Communities and Local Government website (DCLG, 2013). Four common stages are reiterated within the literature and can be summarised as: Stage 1. Exploring the current situation/place and possible problems/issues people perceive; Stage 2. Developing possible solutions that address these problems/issues; Stage 3. The selection and communication of the preferred solution; Stage 4. The process of implementing this idea/solution. Yet, within this structure, the second stage in itself is asking the community member to carry out a creative process that many individuals will not have had experience with before, and may or may not have either the ability or willingness to do.

Overall, there appear to be two distinctive sides to the visioning process: firstly 'the envisioning', which is the journey that involves, to use Sarkassian's terms, 'The Path of Expression', which resonates with both Zeigler and Scharmer's spirit focused approach, that it is concerned with creativity, reflection, ideation, imagination, empathy, deep listening and deep questioning. It simultaneously involves the 'Path of Explanation', which seeks to clarify the ideas and manifests what is within an individual's head and makes that explicit in order for it to be explained and debated amongst other people. Secondly is 'the vision' itself, which can be seen as the product of the two envisioning paths; the outcome of the searching, expressing, the deliberation and debate, or as Van der Helm described it, an explicit idealised expression of the future. It is 'the vision' that will have to communicate with clarity what the ideas are in order to understand how to implement them; not that they will detail the implementation (like a plan would), but synthesised the desired outcome. However, there is little information regarding the use of each of these paths in community planning and also what process might someone go through to travel down both the 'Path of Expression' and the 'Path of Explanation'

to arrive at the destination of 'The Vision' (see Figure 3). How do these envisioning paths transition into something more tangible, what would that look like?

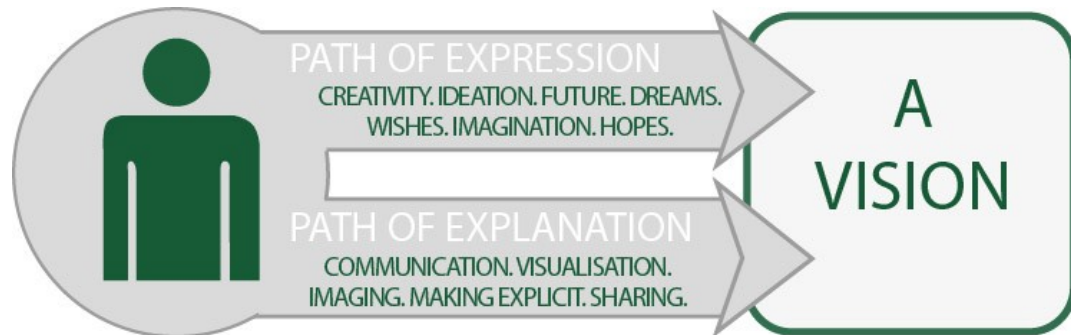


Fig. 3 Visualisation depicting the Path of Expression and the Path of Explanation, together leading to 'the vision', Duggan, K. (2016)

When considering the 'Path of Explanation' (part of the process) and 'The Vision' (destination), both will need to be communicated in some format in order to make the outputs (opinions, views, ideas) explicit, in order for them to be discussed, debated and understood by community members for the purpose of collectively creating the shared vision. Therefore, what medium should a vision be? There is a wealth of literature that supports the notion of visualisations as being useful mediation tools. They allow information to be processed more quickly and with less ambiguity (Verroot et al, 2010), they are a means of translating technocratic information into a common language between all stakeholders and can increase transparency (Bishop and Lange 2005, Sheppard and Meitner 2005). Wates (2014) believes that a "vision should be visualised" (p25), as people can participate far more effectively if information is presented visually rather than in text. The use of graphics, maps, illustrations, cartoons and models, wherever possible, assists people in understanding what someone is trying to communicate to them. Similarly, research has been carried out by Al-Kodmany (1999) within community planning which found that the more realistic an image looks the faster it is understood by participants. This, in turn, leads to agreement being reached more quickly, with less dispute, because everyone involved can understand what is being proposed.

Of course, people can interpret images in different ways and even if a majority of people share an understanding of what the image is communicating to them it does not mean that it is

either the best idea nor that they will necessarily agree on it – a variety of perceptions, experiences, personal interests, preferences and knowledge’s will dictate this. However, as de Bono (2010) states, people see visuals as unequivocal forms that anyone can look at and make of what they will, but the material remains the same, in contrast to verbal communication “where tone, emphasis, individual shades of meaning all give the material an individual flavour which is not available to everyone.” (p53). Yet much of the research into visualisation in the planning literature focuses on the visualisation of visions for the physical appearance of a place and little on the ways to visualise and communicate these inner thoughts of the ‘Path of Expression’, i.e. hopes, ideas and wishes for the future, which may or may not be ideas that express spatial qualities.

The current creation of visions with community planning involves several approaches and methods, depending on the organisation or community undertaking the process. These have included blackboards in the street to engage passers-by to write down what their issues are, while tools such as Common Place (an online GIS platform) are used to collect views of local residents. More creative methods such as postcards from the future have been used and digital tools such as Voxapp and Survey Monkey have often been relied on as a quick way of collecting and analysing digital data. There is also the use of maps, images and diagrams, through which people are asked to draw or photograph things they like in the neighbourhood and areas they would like to change. This information is then collected, the main issues and most common themes are identified and are then used by the Neighbourhood Planning Steering group or the Parish Council to produce the vision statement and objectives. This draft vision statement, along with the draft objectives are then made available to the neighbourhood (via survey or community meeting) after which further alterations can be made. The problem with these approaches is that they are not really generating visions, but merely a collection of ideas or complaints. Additionally, meetings and surveys are not necessarily the best means for generating the data needed for a vision. Survey data are inadequate for understanding behaviours, emotions and feelings and the survey creator does not know how truthful or thoughtful the respondent is being. The author of the survey also imposes their own assumptions as to what is and is not important, and as such the respondent has no room to address certain issues (Ackroyd & Hughes, 1981). As an example of the current approach, the following vision, taken from a recent neighbourhood plan, is quite generic and is heavily focused on conserving and maintaining what is currently there. It does not say much about how people want to live and experience their lives there.

“Our vision is to conserve Birdham as a beautiful harbour-side parish with a close, supportive community at its heart, promote a sustainable thriving economy with a robust infrastructure and maintain the AONB and character of the harbour, canal and its rural and agricultural surroundings” from Birdham Neighbourhood Plan

This thesis argues that the tools and resources currently available to support neighbourhood and community planning are limited in their usefulness, (in terms of assisting, or clarifying the value of, the creation of a meaningful shared vision that is generated through both the ‘path of expression’ and ‘path of explanation’ activities), and in their inclusiveness. Many of the traditional engagement methods used since the 1960’s (referenda, public hearings, public surveys, conferences, town hall meetings, public advisory committees or focus groups) (Rowe & Frewer, 2000; Shipley & Utz, 2012), require members of the public to be physically present at a particular time and place. This requirement has been associated with a range of practical problems of participation, such as limitations of time and costs in the process of policy-making, lack of motivation among citizens, weak citizen expertise or difficulties of including socioeconomically disadvantaged and less articulate groups in the process (Irvin & Stansbury, 2004; Roberts, 2004; Shipley & Utz, 2012), often resulting in the presence of the already engaged citizens, and the ‘usual suspects’ (Coleman and Firmstone, 2014)

“It is time to face facts we know, but prefer to ignore. Legally required methods of public participation in government decision making ...[sic] ...public hearings, review and comment procedures in particular— do not work. They do not achieve genuine participation in planning or other decisions; they do not satisfy members of the public that they are being heard; they seldom can be said to improve the decisions that agencies and public officials make; and they do not incorporate a broad spectrum of the public. Worse yet, these methods often antagonize the members of the public who do try to work with them. (Innes & Booher, 2004: 419)

There are more creative non-digital engagement tools in available, for example, Planning for Real[®]. This approach uses a model of the area in question as the focus point (usually constructed of cardboard). This model, when possible, is made by the local people in order to “build a sense of ownership and to ensure engagement from the outset.” It is then displayed in local public venues to generate interest and participation, whereby cards with ideas or proposals, or blank cards are made available for people to select or write their own interest/idea and place on the model where they think the idea should be implemented. For example, a card may say ‘park’ and anyone who wants a park will select this card and put it on the model where they want it. The cards are counted and their locations on the model noted.

These outcomes are discussed further at public meetings or small group discussions, and prioritised, then discussed according to feasibility, cost, policies etc. and then can be used to develop an action plan. Despite being an approach that may engage those not usually involved, and accessible to all ages, backgrounds and abilities there are several limitations in relation to creating a shared vision. The simple act of counting the cards can be seen as conclusive i.e. most people want a park here, lets create a park here. There is no discussion, deliberation or understanding created between participants as to why (or why not) that individual would want a park in a certain location, and no way to ascertain their knowledge's that informed that decision (community planning toolkit.org, 2014).

Attention more recently has turned towards contemporary technologies in order to overcome aforementioned problems (Kleinhans et al, 20). These included GIS (Geographical Information Systems) which provide an opportunity to open spatial information to all stakeholders. Several applications in this field led to Public Participation GIS (PPGIS) which were supposed to increase informed public participation in decision making. More recently, geo-visualisation interfaces such as google maps or Open Street Map have made opportunities for any citizen with internet connection to generate and publish their own maps and geographical information (Adams, 2013: 464). Smartphones using GPS tech now enable geo-tagging of physical or online objects as well as providing location aware information. Existing platforms which use this approach include Stickyworld and Commonplace, both utilise digital maps to collate conversations and feelings of people in specific areas, which they then analyse. This brings in views of people who feel they have something to say, and evidence to use to validate policies, but it isn't a shared vision. Mapping for change adopts a similar approach, it generates and captures opinions, but it doesn't do anything generative with them. These platforms are also either subscription or bespoke services, not free and accessible for all members of the community to use, alienating those communities with limited resources.

There are in fact hundreds of public participation and neighbourhood planning tools and approaches available, both digital and non-digital. A more detailed (but not in any way exhaustive) list of these can be found in appendix B, with the main benefits and limitations found listed below.

1. Reflection: Many tools and resources appear to prompt community members to reflect on where they live, considering what they like about their existing neighbourhood and what they would change. This is valuable for uncovering the different views and perspectives, and providing people with the space to share their

experiences and knowledge of their community. Yet they appear to fall short of a deeper reflection which gets to the root of why people feel like this, and what they hope for instead.

2. Voicing opinion (sharing and communication): Many of the tools and activities enables the users to add their own comment (via voice in a meeting, through text in and online discussion, on a physical card which is attached to a model), via a ballot vote or a survey. Yet there is little follow up detailing what happens to these opinions. Some of the newer digital tools analyse them, identifying the most common.
3. Discussion: This is linked to point 2, there are some tools which describe using the opinions to formulate 'discussion' from (i.e. argument mapping tools, Sticky World, future scenarios activities). Yet the 'discussion' was vague and open, there was no structure regarding how to discuss, or what these discussions might lead to.
4. Representation: Each of the tools excluded someone in some way. If it required people being in a physical space, such as a meeting hall, it excluded those who could make it. If it was performed online, it excluded those without access to, or the abilities to use, digital technologies.

Whether undertaking a more traditional Town Hall meeting, or contributing on-line, there appears to be a distinct lack of support regarding imagination, creativity for the purpose of producing alternative ideas, ideas that have been developed collectively. There is little presence within these tools of empathic and generative listening, that is, the collective generation of knowledge and understanding through seeing the situation from the perspective of others. Can a process be designed that aims at supporting this?

To summarise, it appears the value of envisioning and creating a vision within Neighbourhood and community planning is not yet fully understood. However, visioning is considered to involve more people than other methods of participative planning (Shiple, 2009), and the ideas and goals it generates do serve as motivators. However, Shiple states it is incumbent on planners to familiarize themselves with critical writing about visioning and to state much more clearly what they actually mean by the term when proposing planning action. In addition to this, the tools and resources available to members of the public currently, specifically those design for young people to use, need to improve. They should support envisioning beyond aesthetics and land use - deciding what goes where. Visions should come from more than surface level opinions of what people like and dislike about the place they live (although this plays an important role). Envisioning should be driven by deeper hopes and dreams of how life should ideally be experienced in their village, an outcome orientated process, which drives

residents to implement the steps to achieve this future desired state. It should be a proactive action and not a reactionary move based upon an undesirable situation. Envisioning then, may have its role in being the accessible element of neighbourhood planning, bringing up concerns and opinions for discussion, opening up the conversation to a more diverse group of people. The question is can a designed process support the generation of these visions? How do they obtain their authority, how do they function and how are they shared and communicated?

Some of these questions may be addressed by exploring envisioning through the lens of design. Design is noted as being a future-based creative process in and of itself, and therefore may lead to more concrete examples of envisioning in action. Herbert Simon (1988) claimed that a designer is “Everyone designs who devises courses of action aimed at changing **existing** situations **into preferred ones**”, but surely this involves generating an idea of what a preferred situation might be? Where then does this future-based idea come from? Envisioning is arguably an activity that sits within the design process, i.e. the pre-requisite to design through which a preferred situation is perceived in order to make the change, a design activity in and of itself, that occurs repeatedly throughout the design process? Looking to a recent Design Council and CABE briefing paper ‘Design in Neighbourhood Planning: How we can help you’ (Design Council, 2013) the initial preparation stage of their design process for a community plan contains the instruction to ‘Develop a vision for the site’ (p9) explaining that “a design vision focuses on what everyone wants to see happen. It describes in words, images and diagrams: the kind of place people want, **physical, economic and social aspirations for the area**, how much change may be needed”, suggesting it is a design activity.

2.4 Design

Neighbourhood planning can be considered a design process in and of itself, as is set out in the National Planning Policy Framework (NPPF) (DCLG,2012), where the fourth section is entitled ‘Requiring a good design’. It attributes good design as not only a key aspect of sustainable development (a key message in the NPPF) but a positive contributing factor in making places better for people (p14), highlighting that design should be of high quality and inclusive for all developments. This view is mirrored by the Design Council and CABE, who state that design helps to enthuse, inspire and encourage people to participate in the planning process (Design Council, 2013). In a follow up publication ‘Design for everyone: A guide to the design process’ (DCLG, undated) design is cited as the thing that **shapes** how a home or an entire neighbourhood is developed. From making decisions about form, materials and appearance, to the arrangement of public spaces, it argues that good design of these elements is important

because it has an impact on the people who live there and on their quality of life.

The image below (fig. 4) highlights the good design principles as set out by the briefing paper (ibid, 2) and recognises that design is not simply concerned with the aesthetics of something, but the function and durability of it and how it shapes a lived experience.

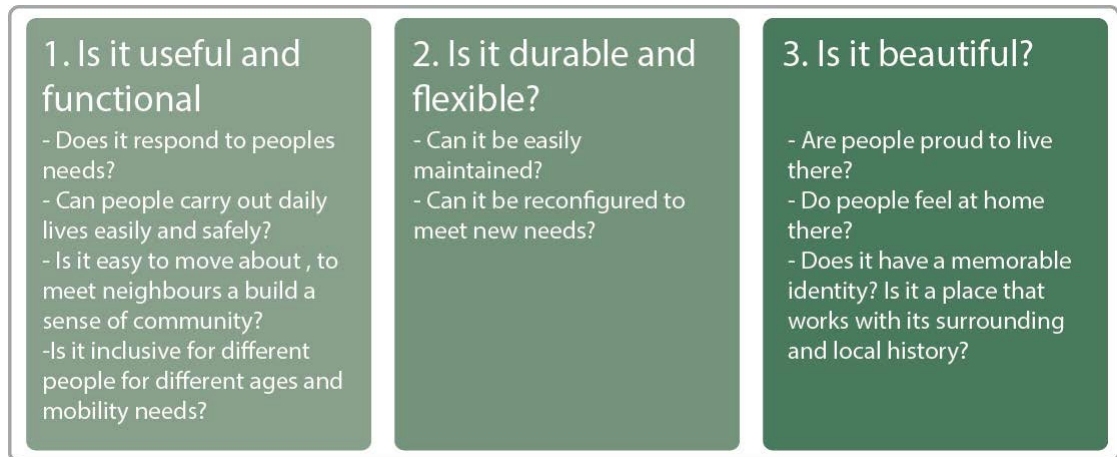


Fig. 4 Adapted from Briefing Paper Design for everyone: a guide to the design process (DCLG, undated, 2)

When considering the design process of neighbourhood planning it becomes apparent that **envisioning and design are entangled activities that cannot easily be separated**, to envision is to design, and as such those community members producing Neighbourhood Plans may benefit from undertaking a more ‘design thinking approach’, which will require them having certain design skills and abilities, the tools and expertise. Design thinking, is the capacity an individual has to ‘think like a designer’, which focuses on how designers approach problems.

What then, does it mean to think like a designer? Most researchers agree that there are three essential activities within the design thinking process: 1) analysing and understanding a problem, 2) synthesising a solution and 3) evaluating the relation between problem and solution (Alexander, 1964; Cross, 2007; Lawson & Dorst, 2009; Lawson, 2005). Fallman suggests that there are three styles in which design thinking can be approached: The Conservative account, the Romantic account and the Pragmatic account (Fallman 2003). The Conservative approach is a linear progression from problem to solution, which is achieved through “well-described, discrete, rational, and structured methodological steps” (Fallman, 2003, p.226) that creates a controlled, logical, generic procedure, such as that of an engineer or scientist. It has no role for subjective judgement or creativity. The Romantic account focuses on the role of the designer as the mastermind and personality, and values the human capabilities of imagination and creativity over those of rational problem solving and abstract reasoning (Fallman, 2003). Therefore, the process is led purely by the designer’s subjective values and preferences. In this

account the designer is considered to have the ability to create innovative design but may not be able to describe the thought process behind it. The Pragmatic account considers design as a situation specific engagement. Pragmatism refers to the existing knowledge of everyday life and work, and rather than relying on theories and methodologies as a guiding principle, pragmatists rely on experience, knowledge and intuition. This account is interested in real world situations where design is carried out in a situation “with people, artefacts and practices, each with their own histories, identities, goals and plans” (Fallman, 2003). This reflects Rittel’s view that a wicked problem cannot be ‘first understood, then solved’ and that it has to be developed within its context. Additionally, rather than being a systematic process, this account takes form from individual interpretation of meaning and effects that result from design solutions in a particular situation, linking to Schön’s reflection in action, where a reflective conversation with the materials of the design situation occurs (Schön, 1992). In this situation, the designer is continually reflecting on the current understanding of the problem and the validity of the emergent solutions (Lawson, 2005).

One of the observations made by design researchers Cross and Lawson (Cross, 1996, 2007; Lawson, 2005) during their analysis of a large selection of designers, was that the problems designers encountered were different – they were often ‘ill-defined’ (Schön, 1983) in nature, where problems and solutions exist independently and the application of a solution could create new unforeseen problems (Lawson, 2005). The types of problems are also referred to, particularly in the realm of planning, as “wicked” problems (Rittel, 1984) due to the fact there is no single solution to the problem. According to Rittel, the formulation of a wicked problem *is* the problem (Rittel, 1984): as soon as you formulate a problem you are specifying which direction the solution is heading in, as Rittel points out ‘**problem understanding and problem resolution are concomitant to each other**’ (1984, p137). Wicked problems are also often symptoms of other problems and, without fully understanding the context they sit within, solutions will only lead to the creation of further problems. Wicked problems also have what is referred to as a ‘no stopping rule’ in that there are no well-defined evaluation criteria for when such a design problem is solved (Simon, 1969), meaning the formulation of a solution could continue indefinitely, making a process difficult to implement, as knowing when to stop and declare the solution the right one will be at a different stage in every process.

Neighbourhood Plans appear to incorporate these criteria: the ‘problem’ with your town or village will be perceived differently by different residents, it may be a symptom of a bigger issue and there is no endpoint to planning due to the fact that as time moves forward situations change, cultures change, environments change and how a place is experienced will

change; there will never be an end point where by everything is 'solved'. This is the case for the visions created within the neighbourhood plan design process: the design is the output, whereby the vision is the externalisation of the desired outcome – and this will continually change depending on external factors and different perspectives. Therefore, envisioning itself is essentially pragmatic in nature, and therefore an example of a wicked problem that needs a contemporary design thinking approach to enact it.

In 2007 the British Design Council undertook extensive research and produced a report that studied the design practices of eleven leading global companies (British Design Council, 2007). Having noticed striking similarities within the different processes undertaken they produced their 'Double Diamond' model (fig. 5). This model has since been adopted, adapted and reproduced by many institutions for design of products, services, and business performance.

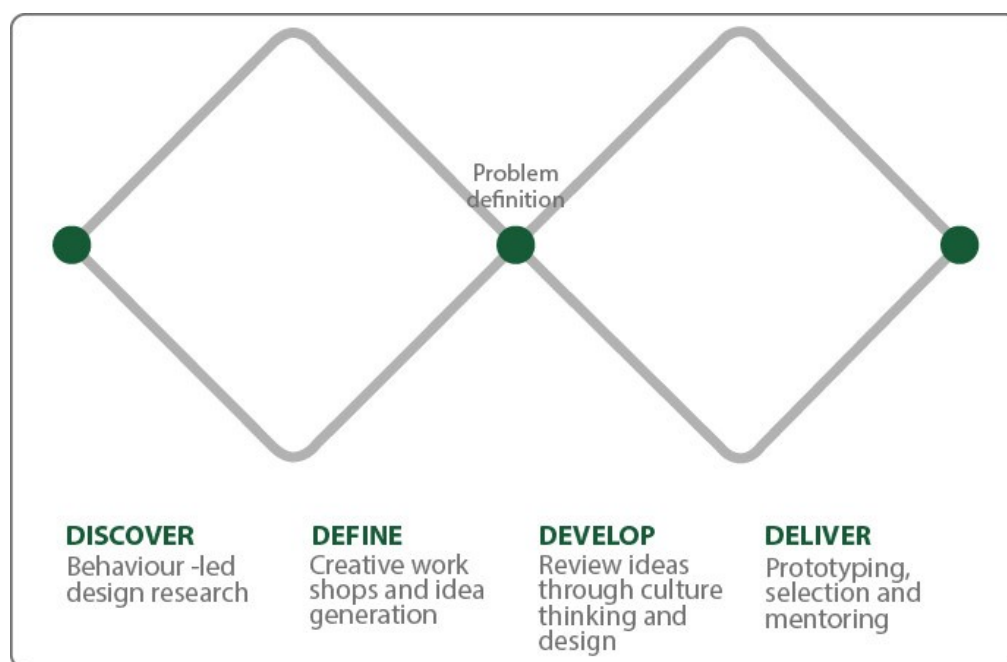


Fig. 5 Adapted from Design Council's Double Diamond (2005)

This model is useful in disseminating and identifying the different activities and methods used in each stage of a design process, such as creativity, imagination and ideation, yet it is still fairly linear in its approach and does not overtly address either Rittel's or Schön's concerns regarding the dynamisms between the problem and solution. It is important to ask where a vision would sit within this process; the roadmaps and guides of neighbourhood planning produce a vision during the very early stages – therefore would a vision sit within only the discovery stage or also at the other stages as well? But if it is conceptualised in this way, each stage would be modified

by the development of the vision, which would undermine the idea of an orderly linear developmental process. In contrast, Donald Schön emphasised the importance of designers working between the problem space and the solution space simultaneously, going back and forth between these two spaces in order to ensure that what was proposed was not creating additional problems. Dorst (2011) supports this “developing and refining together both the formulation of a problem and ideas for a solution” (Dorst, 2011, p434) with constant iteration between, or as described by Maher, Poon and Boulanger (1996) ‘co-evolution’ of the “problem space” and the “solution space” (both terms coined by Newell and Simon, 1972). The process of iteration is in effect bridge building facilitated by the identification of a key concept or ‘frame’. “The ability to frame a problematic situation in new and interesting ways is widely seen as one of the key characteristics of design thinking” (Paton & Dorst, 2011, p. 1). By re-framing the problem the solutions will also change, potentially forming new, interesting and creative ideas. This approach is similar to Advanced Design where framing mixes “contextual inquiry together with inspirational exploration, joining the present context and the future anticipation” (Celi and Rudkin, 2015, 65). Bringing this back to envisioning, people’s visions for the future of their community may alter the more that they understand a situation. – referring to figure 6 - an initial vision at point A may be affected by things learnt during the discovery phase, producing vision B. Vision B may change to vision C due to experiences and interactions during the define stage, and the developing stage may change that to vision D.

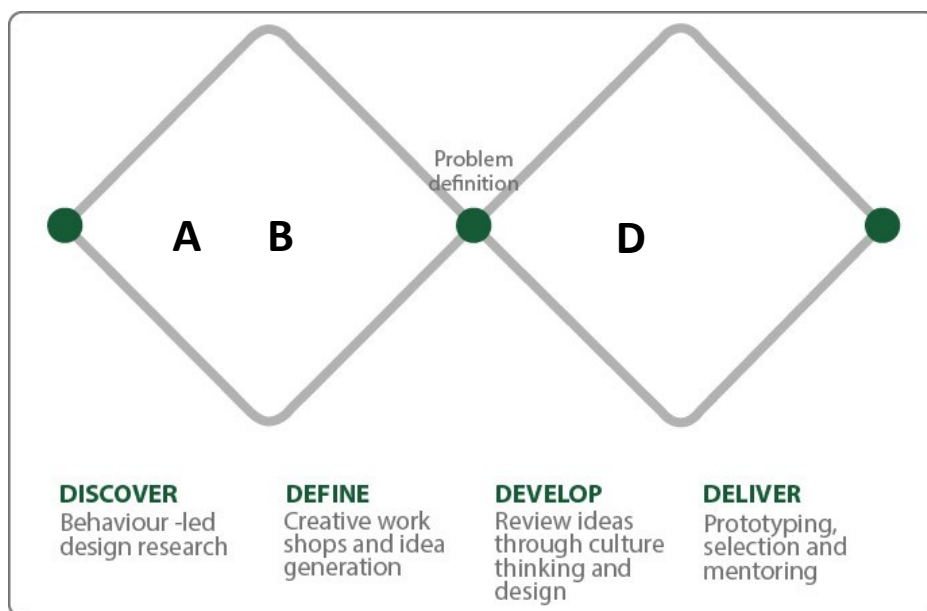


Fig. 6 Adapted from Design Council's Double Diamond (2005)

Therefore, the contemporary model of envisioning needs to move away from the linear approach and become one that moves between the problem space and the solution space in order to constantly move between the present and the future state, between the perceived problem and the perceived solution, as visualised in fig.7. The process also requires the integration of the path of expression and explanation between these two spaces. However, there still remains a gap in knowledge regarding how someone with potentially no experience of envisioning or designing can be supported in this process.

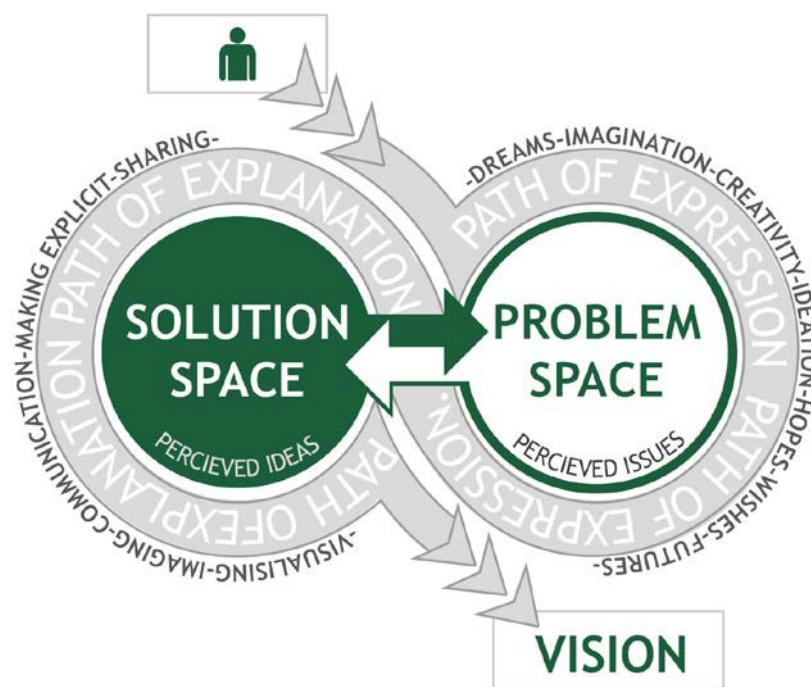


Fig. 7 Moving between the problem and solution space to create a vision, Duggan, K. (2014)

Section summary: Envisioning and design are entangled activities that cannot be separated; envisioning leads to visions which in turn predetermine the actions that follow. Design is the action of realising a vision. Therefore, a design approach to envisioning was deemed suitable. How a problem is perceived and understood by an individual, leads directly to what solution they perceive as suitable, this limited view of a problem narrows the solutions deemed appropriate. To create a **shared vision** of how the neighbourhood should be, residents will need to develop a shared understanding of each other's perspectives. Therefore, there needs to be a process designed which supports the exploration of a problem space and the solution space from different perspectives/frames.

2.5 Creativity and Imagination

Design and envisioning are essentially problem-solving activities, in which the moment of generating a 'new' solution to a problem or situation is often attributed to creativity, the moment being referred to as the 'creative leap' (Dorst and Cross, 2001). In its broadest sense creativity can be described as “the goal-oriented individual/team cognitive process that results in a product (idea, solution, service, etc.)” Zeng et al (2011). Whilst envisioning offers the conceptual space, creativity is the cognitive activity required in order to do something with the conceptualisation - it is a cognitive process (Lawson, 2005). The cognitive activity of creativity is described by Boden as “the exploration and transformation of conceptual spaces”, where a conceptual space is a bundle of knowledge which can be connected to other bundles of knowledge via associations. Hence exploration is the activity of recalling these bundles to a conceptual space and this exploration activity is initiated by a stimulus perceived either consciously or unconsciously (Boden, 1996). When two or more knowledge bundles are applied to a potential solution in a new domain a transformation occurs that **may** produce an idea that wasn't previously there, known as an “eureka” moment (Sternberg, 1998), or creative leap.

Imagination is considered key for creativity and, in turn, envisioning (Celi and Rudkin, 2015; Fesmire, 2003). Dewey explains the two roles of imagination as being firstly, “empathic projection” which is the way a person responds directly to others and their thoughts and feelings, and secondly, imagination as a way to escape current patterns and imagine alternatives (Fesmire, 2003).

The latter point relates to Edward De Bono's (2010) process of 'lateral thinking' which involves escaping from existing patterns of thought (that our brains create in order to get things done and make sense of the world around us), or in other words to promote 'exploration'. Through provocation, De Bono believes it is possible to restructure these rigid patterns and provoke new ones, resulting in the generation of new alternative ideas. De Bono explains that humans have a “self-maximising memory system” (p42), a system which arranges information in a pattern according to the order in which it is received. This system is limiting as anomalies are difficult to incorporate into the existing pattern, which is where lateral thinking is useful as it attempts to break down and restructure the existing patterns by stimulating new pattern formation by juxtapositioning unlikely information. This is similar to what Koestler (1964) refers to as 'Bisociation' which is a process whereby previously unrelated ideas are brought together and combined, making entirely new connections and new ideas. Except that lateral thinking doesn't necessarily produce the 'eureka' moment (i.e. a creative solution), instead it

uses the information not for its own sake but for its effect within a longer process; one stage may have to be wrong in order to lead to a correct solution, therefore it encourages variations without judging them (De Bono, 2010, p54). This, De Bono argues, facilitates users in producing new ways to do something or a new way of looking at something, rather than always proceeding with the most obvious approach. Lateral thinking is not a substitute for vertical thinking (which involves sequential steps that must be justified at each stage or the idea is dismissed), but a complimentary process. Lateral thinking is generative, aiming to produce many variations, where vertical thinking is selective. Although at some point these variations have to be assessed and questioned for their suitability in order to make the task useful and purposeful, this is where De Bono suggests there are three groups to divide them into: ideas of immediate usefulness, areas for further explanation and new approaches to the problem. This leads to the questions of who assesses these variations, how are they categorised and how is it decided what is useful?

Creativity is often considered to be synonymous with lateral thinking, with the most well know activities consisting of challenging assumptions (by thinking outside the box), generating alternatives (even if you have what can be considered a satisfactory solution), suspended judgement (where an idea isn't there to be 'right' but to be effective and lead to another idea), brainstorming (where any ideas are encouraged and serve as provocation for other ideas), analogies and random stimulation (e.g. by opening a dictionary to find a random word and apply it to the problem) (De Bono, 1967, 1970,1992). There is also the notion of 'dominant ideas and crucial factors', where De Bono argues that the 'crucial factors' tether the solution, therefore restricting its mobility when really the crucial factors are more often than not merely assumptions. Once studied, if not found to be crucial the new ideas no longer have to be tethered to it, allowing more freedom in the situation (De Bono, 2010, p103). Yet, does the generation of many ideas necessarily mean that these ideas are creative, novel or indeed useful?

The idea that lateral thinking is necessary for creativity is rejected entirely by Robert Weisberg, who argues that a creative process follows an ordinary logical thought process of trial and error, feedback and reflection, and does not require lateral thinking (Weisberg, 1999). He argues that creative people are such because of the different knowledge and skills they possess, compared to someone who is considered non-creative. Whilst de Bono suggests to solve problems, you should adopt a new perspective of, an engineer for example, in order to break away from your own knowledge, Weisberg claims that:

" from the perspective of the engineer, there was nothing new involved: He was able to apply his knowledge relatively directly to the new situation he was presented with, because of a straightforward relationship between what he saw and what he knew. For the engineer, this response was just another example of recognising something familiar. ... "(Weisberg, 1999, 248)

It is only from the perspective of a non-engineer that this would be considered creative thinking. However, in terms of community members having to undertake a creative and design based activity of envisioning, they often don't have the existing knowledge and skills to do this. Therefore, lateral thinking is identified as a means of supporting them in thinking outside the box, and thinking about problems and solutions from the perspective of somebody else - in order to break away from the more obvious, narrow singular solutions or understandings of a situation.

Despite Dewey's belief that imagination is key to creativity, there is very little literature focusing on imagining, with the exception of Folkmann (2010), Moore (2003) and Liddament (2000). In Folkmann's view, imagination is the 'formative power of creativity' and understands imagination as "the capacity or the faculty of consciousness to envision things that are not present in the physical world that surrounds us. We might even say that it is the capacity of imagination to negate the given and material that essentially enables abstract thinking and our ability to categorise the material" (Satre, 1940). He states that everybody has the power of imagination and that it is active all the time but the challenge is gaining insight from where it is enclosed in our consciousness. Gedenryd (1988) sees imagination as a structure that comes to itself in the dynamic interaction between inside and outside, again relating to perceived stimulus. In the same way that cognition in design should not be regarded (only) as thinking, but rather as an activity of inquiry and action that is flexible due to its specific function. Folkmann uses this structure of dynamic interaction to examine the junction of internal, abstract conceptualisation and outward, concrete materialisation. Rather than understanding how the mind gains information from the outer world, the interesting angle is rather what kind of knowledge lies within the individual's consciousness and "how it is employed and transformed here" (Folkmann, 2010, p3) and further than that, how can this transformation be made explicit in order to communicate it with others. Folkmann goes on to stress **"it may prove productive for a discourse on creativity to address some features of the modus operandi of imagination in design"** (Folkmann, 2010, p. 1) suggesting that there is currently a gap in understanding how the imagination is facilitated and used in a creative process such as envisioning.

Miller (2007) observed that a lack of imagination can limit creativity; when people were asked about their vision for the future, the most common feedback are pictures of “the good, the bad and the ugly”. What people appear to provide are opinions and reflections, but not visions. In order to address this UNESCO have been carrying out foresight workshops aimed at increasing peoples’ capacity of imagination by challenging their conception of the futures and therefore challenging the way in which they think about the present; linking the ‘visions’ that people create to the ‘frames’ through which they look at reality. According to Celi and Rudkin (2015) people need to be pushed or prompted to stimulate their imagination and to overcome what they think they know and the frames through which they view reality. Frames, according to Schön and Rein, are structures of belief and perception (1994) made up by schema (patterns of thought or behaviour that organises categories of information and the relationship among them) and are used when inferring meaning on situations. In terms of problem solving, frames have normative implications in that they imply that a certain type of solution is called for (i.e. if a problem is framed in terms of disease, the solution might be medical, yet if the same problem of disease was viewed in terms of being a punishment for sin, the solution would be very different). This diagnostic prescription leads identifying a problem straight into recognising a solution in a way that seems obvious, yet this ‘sense of obviousness’ can be problematic (Schön and Rein, 1994, p26) as it narrows down the potential solutions an individual is able to consider. If, however, a frame is changed (reframed) the meaning that is inferred may also change. It is suggested that frames represent the different levels of reality that exist (Inayatullah,1998; Bell, 1997), each with different levels of depth, duration and visibility (i.e. the surface level, referred to as ‘litany’, are easily visible, whilst deeper phenomena such as social causes, worldviews and myths are less visible and last longer in time). The challenge lies in understanding this inner information from the deeper, non-explicit levels. A popular approach with futurists is the use of Lakoff’s (2008) cognitive work of narratives and simple stories, which he believes interpret our reality which, in their simplest form, are referred to as ‘frames’. The ‘envisioning’ occurs where the designer connects these initial frames of the problem to the new information in an **abductive sense making process** in which they organize, evaluate and filter data producing new knowledge. Reframing them communicates to people, through a different form of narrative, the connecting ideas that were previously separate and brought together in envisioning (Celaschi and Celi in press). Celi and Rudkin (2015) argue that stories are the main tool through which to frame or better re-frame realities and engage people and stakeholders in an active change. They argue we don’t need a better rational argument for the benefits of thinking about the

future, but we need better stories.

This abductive sense making process ties in with the pragmatic approach to designing, the term itself being coined by CS Peirce as a type of reasoning differing from deduction or induction (1988), and described by Dorst as the 'core' of design thinking (2011). Peirce saw abduction occurring as a flash of insight, whilst fellow pragmatist Laird argues that in the context of generative and creative problem solving, the insight is developed not in a "flash" but from a process which leads to an insight, which only *seems* to appear instantly (Johnson-Laird, 2005). This indicates that an abductive process can be created which supports individuals in generative ideas and visions, and framing is a means to achieve this. Cross and Dorst move away from the idea of a creative leap (Cross and Dorst, 2001) and see a solution to a problem as being much more of a bridge between the two spaces: following a period of exploration the problem space and solution space are both unstable – until a 'bridge' emerges that pairs the problem with a solution, that is sudden coherence within the information available. This is seen as a surprise, something that does not fit in with the designer's normal routine behaviour, which then drives the solution and is identified by Dorst and Cross as bursts of development that are unexpected (Dorst and Cross, 2001).

This 'surprise' information or event that links with a coherent piece of information is referred to by Schön as the pivotal role that leads to framing or reframing. Writing in relation to policy design, Schön argues that people possess and further develop a critical rationality which allows them to reflect on the frame through which they see the world, enabling them to observe how their actions and beliefs can contribute to contention or resolution of policy conflicts (Schön and Rein, 1994). If a surprise or unexpected piece of information is linked to this frame (or a 'reframe') an individual is required to step back from the situation and question their frame/idea of the problem and solution. This achieves two things: it enables people to recognise their own frame; *and the fact that it is a frame*, before finding a new 'lens' to look through. Watzlawick et al (1967) believe this 'surprise' can be achieved by changing the conceptual and/or emotional setting i.e. framing negative situations as positive opportunities. Once an individual understands and can see the world through their own frame, they have the opportunity to appreciate that others have *their* own frames which are, for them, equally valid. Finally, and this is important in terms of collaboration, each person has to accept that no one person has the 'right' frame, meaning all frames are valid and can be equitably explored for similarities and differences.

In terms of envisioning and neighbourhood planning, having the ability to reflect on your own frame of reference could play a role on two levels. Firstly, having an individual ability to reflect on your own frame *and* reframe could be used for the generation of new ideas. Secondly, if people can appreciate that others view the world through their own frames, they can begin to explore similarities and differences between these individual frames. This suggests the possibility of generating a 'shared frame' to view the existing situation, which may then lead to a shared vision.

There are obstacles to achieving this synthesis. For example, frame reflections do not always lead to reframing and, even if they do, reframing does not necessarily lead to resolution. There is also the issue of relativism: no frame has a neutral standpoint; frames cannot objectively be created, meaning that the evaluation of an individual frame is not possible as the validity of one frame is always in relation to another. This, according to Schön and Rein (1994), can be dealt with using translation between different frames, where conflicting parties put themselves into the shoes of others in order to facilitate the creation of shared frames. Yet this relies on people being willing to put themselves in the shoes of others. Schön and Rein refer to Habermas' (1992) work of 'ideal discourse settings', where parties have the openness to see things from others perspectives, by accepting or rejecting arguments based on the arguments alone. Yet John Forester (1999) has suggested that mediators may be able to create the conditions for ideal discourse if they act "less like experts, judges or implausibly neutral bureaucrats and more like new friends who can create a space for speaking and listening, for difference and respect, for the joint search for new possibilities, and ultimately for newly fashioned agreements about how we shall live together" (197). The current gap in knowledge appears to be how to create the space/enabling environment for this ideal discourse to occur.

Section summary: In order to generate a shared vision, a community needs to develop a shared understanding of the problems residents face and what might address these. To explore different solutions to these problems (or even develop different problem definitions) community members require either more knowledge surrounding the problem (Weisberg), or to have their creativity stimulated. This can be achieved through lateral thinking (which disrupts the structured patterns of thought) or empathic projection (which can alter the individuals 'frame' through which they perceive the problem or solution). Using the information generated in an abductive sense making process can lead to new understanding of the problem, or new solution. How these techniques can be designed into an envisioning process remains unclear.

2.6 Collaborative Creativity

This section focuses on the generative practical activities that could transform visions into shared visions, discussing how reflecting can be carried out collectively, and how creativity and envisioning can be group activities. Celi and Rudnik (2015) state that “the collective, social and shared construction of the vision is the key for its own success”, believing that if more people share and desire that vision, the more likely it is to be adopted. They also believe it reduces the power of the ‘decision makers’ as it offers alternatives to the perceptions and cognitions presented to people by decision makers (those in power), presenting instead ideas for alternate futures that question the status quo (van der Windt, 2013). Additionally, people have their own way of perceiving the world and only through it being a collaborative activity will these different viewpoints and paths be explored.

The importance of having this collaborative approach within neighbourhood and community planning has been summarised by Wates (2014), who believes local people are the best source of knowledge and wisdom of their surrounding areas, as people “all have a remarkable understanding of their surroundings and are capable of analysing and accessing their situation, often better than ‘professionals’” (Wates, 2014, p22). The process of working together is believed to build community, and community involvement is becoming an increasingly statutory requirement. People also have the right to participate in decisions that affect their lives and being part of the process such as this can empower people, build up their confidence, capabilities, skills and ability to co-operate (Wates, 2014, p6). Wates states that design solutions are more likely to be in tune with what is needed and wanted when suggested by members of the community, and through discussions and collaboration people gain a better understanding of the options that are realistically available and start thinking positively rather than negatively about what can develop in the future (Wates, 2014, p7). This isn’t about engaging every member of the community, but what is important is ensuring that a full spectrum is involved, as this is “often more important than involving large numbers” (Wates, 2014, p18).

Yet how does the collaborative activity of creating a shared vision come about, and how can it be practically supported? Looking to the work of creativity researchers (Amabile, 1996; Csikszentmihalyi, 1996; Mamykina, Candy, & Edmonds, 2002; Osborn, 1953) as well as design researchers (Cross, 2007, 2011; Fischer, 2004; Lawson, 2005; Löwgren & Stolterman, 2007; Shneiderman, 2003) there is an apparent emphasis on the importance of the social nature of creative design activities. Fischer (2004) argues that modern design problems are increasingly complex and require more knowledge than an individual can possess. Csikszentmihalyi (1996)

argues that much of our creativity emerges from interactions and collaborations with other individuals. More general theoretical frameworks on group work such as “distributed cognition” (Hutchins, 1996) also move away from the individual mind as a source of cognition, but rather include the interactions with other people and the environment (including tools used) as fundamental to cognitive processes. According to Hutchins, distributed cognition uses insights from sociology, cognitive science and psychology to emphasise the social aspects of cognition.

The importance of “distributed cognition’ is a view further supported by Donald Norman (1993) who argued that the heart of intelligent human performance is not in an individual mind but in 1) groups of minds in interaction with each other or 2) minds in interaction with tools and artefacts. When a mind is working alone distribution cognition functions well because it is between that individual’s head and the world. But when a group of minds are working together within a collaborative process, the group has no head, meaning that externalisations (Bruner, 1996) are critically important for social creativity. Therefore, all types of creative collaborations share a basic need for externalising and distributing design knowledge across individuals (Cross, 2011; Fischer, 2004; Lawson, 2005; Löwgren & Stolterman, 2007; Paulus, 2000).

In terms of facilitating the creation of a ‘shared vision’ it is imperative that users are able to **externalise** their ideas in a **shared language that is understandable to other stakeholders** in order to have something explicit to discuss. This is supported by Cross (2011) who argues that externalisation is crucial not only for gathering information and sharing ideas, but also for presenting and discussing design solutions in design groups. “Externalising an idea, making it ‘visible,’ also makes it accessible for criticism, development, expansion, revision, and possible discard” (Löwgren & Stolterman, 2007, p51). The point is what goes on in the brain during creation and imagination cannot be seen, but externalisations created by people, can lead to insight of what these internal thoughts are and through these externalisations it may be possible to generate an understanding of what approaches and processes facilitate envisioning or stimulate creativity. Fischer (2000) states that knowledge externalisation is important for three reasons: 1) to move from vague mental conceptualisations to more concrete representations, 2) to provide means for others to interact with, react to, negotiate around and build up, and 3) allows opportunity to create a common language. This is important when considering the creation of a ‘shared vision’, participants within the community planning process need to deliberate ideas, views and opinions and in order to do this they are required to visualise a way that is readable and accessible to all.

This idea of externalisation ties in with generative design research methods used by Sanders and Stappers (2012) in their co-design processes and ‘cultural probes’ (Gaver et al, 1999). Here anthropological approaches offer a large variety of design-oriented ways for gathering information including, but not limited to, such tools as role play, group sketching, storyboarding, storytelling, character profiles, mind maps, rough prototyping and issue cards. Each of these is designed to assist participants in expressing themselves in order to communicate clearly their ideas and knowledge to the other stakeholders (Sanders and Stappers, 2012), and could support cognitive distribution and externalisation. For example, a participant who is asked to create a character profile card would do so using the knowledge and experience they possess around that subject, externalising what they know, which could then be seen, read, interpreted and hopefully understood by another person.

Imagination and empathy are well established in the practice of collaborative design, with the techniques of personas, role-play and characterisation being employed by many designers in both practice and in research. Kaario et al (2009), use role playing in their creation of a table top game entitled Character Game. The role playing provides an empathic approach to user data and provides a way to ease the articulation of different views. Role playing games, either computer or table top, have one thing in common: the character. The character is what the player uses to interact with the game world, usually via a strong narrative (Hitchens et al, 2009). By using templates that detail the traits, habits, personalities, disabilities, voice and visual image of the character, participants are encouraged to adopt the character to play the game. By doing so, researchers believe that the participants are able to put themselves in the shoes of another person and carry out actions not from their own point of view, but from what they believe their character would do. Cooper (1999) uses a similar approach in his persona work, using visual and textual descriptions of potential user characteristics, needs, limitations and lifestyles to create a shared understanding of users within a design team. Brandt (2006) takes this idea further and proposes that exploratory design games can build a common ground for collaborative design activities and that they can be used to conceptualise design, change perspectives, and negotiate and build scenarios.

There are, however, certain limitations to these approaches, which seek to employ a form of empathy. Kimbell (2013) identifies these challenges by stating there are two different forms of empathy: ‘cognitive empathy’, which is the putting of oneself in the user’s shoes, the ‘I want to understand you’ empathy; and the ‘affective empathy’, where the participant feels the same emotions of the potential user and, according to Kimbell, can sometimes cause them to lose sight of the interpretation and analysis and become too focused on emotions. This is also

referred to as the 'I feel your pain' empathy, where the emotions of the situation override the purpose of why they are doing it and it becomes solely about experience. Performative empathy is also identified by Kimbell, in which people who may or may not have empathic capacities perform as though they do have them. This asks questions around whether the research can be empathic, or in this case, whether 'true' empathy can really be facilitated, or whether participants act in what they believe to be 'correct' ways that are sought after by the facilitators. She notes, "Empathy is not singular. It's complex, contradictory and hides the power plays involved in studying and interpreting what goes on in the world and the intended and unintended consequences that follow" (Kimbell, 2013).

Collaboration does not only lie in creating visions (or solutions, or ideas) collaboratively but in creating a shared understanding of the problem. Dewey's (1939) process of **joint inquiry and imagination** (Steen, 2013) where the focus is on identifying a problem collectively in order to understand how to address it collectively supports this. The key feature of his process is the importance he puts on personal and subjective experiences, arguing that although people may agree that a specific situation is *experienced* as problematic, there are questions and different opinions regarding what is problematic. He argues that the working and articulation of a problem is important as it will decide what suggestions or solutions are listened to and which ones are dismissed. Dewey also supports the notion that problems and solutions should be considered simultaneously so that the individual or group can be aware of how a potential solution could change the problem or create new ones. This process could lead to constructive criticism and possibly generate conflict. However, recognising and coping with different perspectives and motivations is necessary for developing a shared understanding of what needs to be done and how individuals need to cooperate (Kleinsmann and Valkenburg, 2008). As highlighted in fig. 8, members of the community are not only generating individual externalisations to share, but should also be undertaking a process a joint enquiry where they are exploring the problem space and solution space together, from each other's' perspectives.

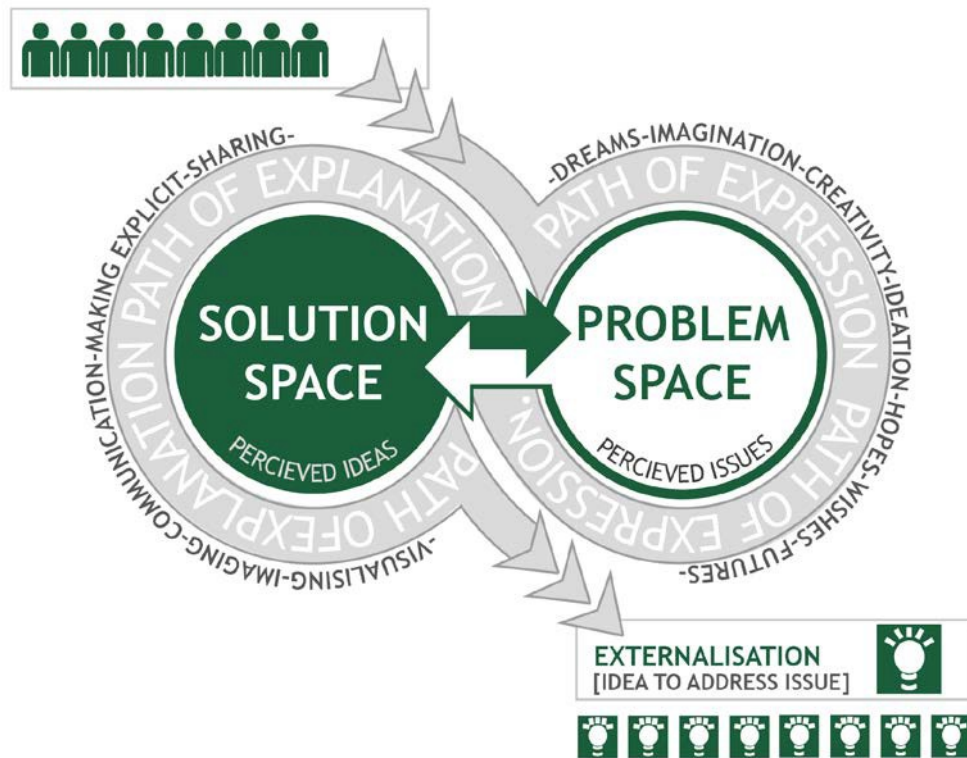


Fig. 8 Collaborative envisioning Diagram demonstrating the production of visualisations, Duggan, K. (2014)

Carrying out joint enquiry and generating a shared understanding of the issue tends to rely on face-to-face discussions, which are limited in success by several barriers. Production blocking relates to verbal communication restrictions within groups (Diehl and Stroebe, 1987). Due to the synchronous nature of group conversations, participants in a group cannot exchange their ideas simultaneously, meaning that some members are inhibited from expressing their ideas whilst waiting for their turn to contribute to the conversation and there is an increased chance that they will either forget their point or it will no longer be relevant as the conversation changes paths. Another identified limitation to this form of discussion is that individuals may heavily reflect on their own ideas and are thus not always interested in listening to others (Diehl & Stroebe, 1987; Bouchard & Hare, 1970; Isaksen, 1998). Evaluation apprehension, which is the fear of criticism within a group preventing individuals externalising their ideas, has also been identified as a barrier. This term is based on the observation that group members often perceive their own expertise to be less important than that of others in the group. Empirical studies have shown that groups exposed to strict evaluation criteria contributed less

to ideas than those with vague evaluation criteria (Diehl & Stroebe, 1987; Isaksen 1998). It has been proposed that production blocking can be reduced by using visual media or written notes for externalising and sharing ideas, as group members are able to work independently while simultaneously sharing ideas (Osborn, 1953). Researchers also noted that being able to contribute anonymously (e.g. through computer systems) reduced evaluation apprehension (Paulus, 2000).

Section summary: In order to produce a shared vision or even achieve a shared understanding, the visions and ideas which are conceived have to be made communicable through externalisations, i.e. the explicit physical representations of what is going on in one's head. These must be in a shared language, and in format and environment that those involved are able and comfortable to discuss and respond to; what that language or medium is for visions, is currently unknown.

2.7 Deliberation

In order to carry out joint enquiry to form a shared understanding of the problem and a 'shared vision' of the future, the process needs to do more than simply support the voicing of opinions, and externalising and sharing creative ideas of individual visions for the future. Research suggests that deliberation is required in order for people to discuss rationally their concerns and ideas in a considered open manner with the intent of arriving at a collaborative decision (Schuler, 2010, 92). Deliberation can be divided into two groups: direct or participatory democracy; and liberal or representative democracy (Held, 2004, p.4). However, Petrik (2009) argues that "Deliberative democracy", which emerged in the 1980s, does not fit into either group: "It is a variant that seeks to justify political decisions in a process that involves free and equal citizens in deliberations on issue" (p1). Deliberative thinkers argue that the quality of decision-making should be at the centre of public debate, that political rationality is inseparable from the idea of justification to others and that the strengthening of discursive rationality is vital to the search for the best substantive solutions to collective problems (p.205). Decisions that may affect a multitude of citizens must be evaluated and justified by a multitude of citizens before implementation, and therefore these decisions require investigation, deliberation and cooperation by those who are likely to be affected (Roberts, 2000).

While there is a general trend among deliberative theorists that deliberation is simply a decision-making process, Kanra (2012) suggests that there is another important phase of deliberation, which is orientated to social learning and understanding. There remains a lack of

clarity surrounding the concept of social learning. However, in their paper 'What is social learning,' Reed et al (2010) concluded that it should meet two conditions: 1. Demonstrate that a change in understanding has taken place in the individuals involved and 2. This must go beyond the individual and become situated in the wider social units or communities of practice. Kanra (2012), although less clear about the conditions, agrees that social learning is about understanding, and describes it as the initial phase of deliberation – a prerequisite to effective decision making, involving an assessment and evaluation of other perspectives. Here the interpretation of differences becomes the focus and reaching an agreement is secondary. It is supported by Gadamer's (1960) notion of 'fusion of horizons' whereby nobody is fully detached from their subjective views, yet they arrive at a new juncture through learning without specifically striving for rational agreement. When the focus is on decision making however, there is often a formal time constrained process in which participants have to make a decision via voting, consensus, or some other agreement. Dryzek (2005) argues that this form of decision-making might exacerbate the possibility of deliberation becoming more of an identity contest and possibly even undermines the role of cooperative interaction by triggering an inclination towards protecting existing configurations of interests. However, Fung (2003) argues in favour of 'hot' deliberation in which participants may take deliberation more seriously if they have a lot at stake and believe they can influence a decision. This is countered by Bohman (1998) and Fennema and Maussen (2000) who believe unrestricted public discussion increases democratic quality as it takes into account all existing positions and brings them into the public eye. As Warnke (2001) argues, the purpose of social learning is to understand other peoples' perspectives so that we can reflect on them potentially generating a new perspective.

The important role played by informal ways of deliberation was emphasised by Habermas, Dryzek (2005) and Young (2000). Habermas' Theory of Communicative Action (1987) offers insights into the role that learning reciprocity plays in communication, suggesting that action does not take place until there has been a process by which people have come to a shared understanding about something (Myerson, 2001). Heidegger's (1982) view is that it requires a process of true communication, where true communication is not about the speaker wanting control but about the hearer gaining understanding. This understanding then evokes the response, which leads to a dialogue and debate, which Heidegger believes should occur slowly and tentatively. This is known as 'Communicative Rationality' whereby the central presupposition is that "communication is only rational when it has the element of debate, or potential of debate inside it" (Myerson, 2001). Habermas' concern is how people gain

knowledge and how they use it. He believes two people could be given the same information, but one may have acquired it in a far richer, more meaningful and more enabling way than the other, i.e. they might have received the information via a genuine dialogue versus having it fed quickly to them by digital means.

The injection of technology into this deliberative process has changed it fundamentally (Myerson, 2001). It has created certain affordances that speed up communication and prompt questions surrounding the richness and meaningfulness communicated in these transfers. Myerson (2001) states that as modern society cannot operate by full scale dialogue at all times, all kinds of relief mechanisms substitute the dialogue, i.e. the protocols and rules which remove the necessity for discussion to create spaces to carry out genuine communication, which is referred to by Habermas as 'system space'. However, Habermas identified the danger of these systems managing life; these systems controlled by machines see automated responses and rules and processes where people would carry out tasks without having the experiences. Through her work in *Hearing the Other Side: deliberative democracy versus participatory democracy*, Diana Mutz (2013) concluded that deliberation needed more than participation (i.e. more than just the speakers contributing their own thoughts), but "required cultivation of diverse social networks in which trust has been built and people listen to different opinions to their own". There has to be a diverse contribution of viewpoints that hearers **trust in** and are willing to listen to, even if they share potentially opposite views.

However, why would anyone seek out opinions differing to their own? Is it possible to design a process that supports this cross-cutting exposure? Wisniewski (2013) believes there are indeed disenfranchised groups who should be included, and that diversity of opinions is valuable, but he does not believe in the logic that introducing more voices results in better discourse, or that a greater number of voices more closely approximate ideas. Indeed, his argument is that it can further confuse an already complicated situation. However, philosopher John Stuart Mills is of the view that understanding multiple points of view is the only way in which people can be sure their view and idea is the correct one:

"The only way in which a human being can make some approach to knowing the whole of a subject, is by hearing what can be said about it by persons of every variety of opinion, and studying all modes in which it can be looked at by every character of mind." John Stuart Mill (On Liberty, 1869)

In other words, Mills is suggesting that a person cannot truly claim that they know what it is best to do about a situation unless they understand the situation from the point of view of

every other person who will be affected by it. While this is an utterly ambitious proposal, it does indicate the importance of empathy in gaining insight into the opinions of others. If the practice of empathising can be aided in some way, people may be more insightful when considering their ideas and responses to issues. Yet, an increased ability to speak even if doing so with from an empathetic stance “does not necessarily translate into an increased likelihood of being heard” (Wisniewski, 2013, p251). Just because more people can participate holds no guarantees that more people will, and if more people do participate holds no guarantees that their opinion will be heard, therefore designing tools that engage and encourage people to contribute need to aim to ensure that their contributions are purposeful. Beyond guaranteeing these ideas are disseminated into the awareness of the affected group, there is also the challenge of presenting these ideas as reasonable and worth listening to by those with different opinions: “Cross cutting exposure in digital space still depends on building trust with those who have different viewpoints, at least enough trust to include them as members of an online network and to take their ideas seriously when they express them” (Wisniewski, 2013, p255).

Despite this, Beth Simone Noveck (1999) does not consider deliberation in itself to be enough. To have citizens merely discussing views and opinions of what should and should not be done has no guarantee of achieving an outcome. She believes the process lacks imagination; that it does not connect the diverse skills of the stakeholders and is focused on achieving consensus. Noveck supports collaboration as an approach, in which the focus is shifted onto effective decision making and outputs. Collaboration is not a consensus, but a means to an end. In many cases (the neighbourhood plan included) a decision needs to be made within a defined time scale and therefore deliberation cannot continue indefinitely. Additionally, what will talking (or swapping opinions) actually do? Noveck believes that the weakness of the deliberative democracy approach is that it makes talking the centre of normative aspirations, in which people are powerless to do anything but talk, “in theory, convening people of diverse viewpoints can have a beneficial impact on policy, assuming that the political system is structured to translate these viewpoints into meaningful participation in decision making” (p61). Noveck’s opinion is that civic talk is actually largely disconnected from power, and that more possibilities lie in the world of Web 2.0 where ordinary people can collaborate with one another to do extraordinary things. She believes that we must “distinguish between deliberation and collaboration as forms of participatory practice, exploring many examples of ordinary people joining together to do extraordinary things via the internet” (2010, p64) and that the process should involve self-selection; not everybody has great knowledge or

experience in everything but by allowing people to choose to participate in what they feel they can contribute to makes it egalitarian. For every project there is a different kind of expertise that can be sought and “experts will flock to those opportunities that exploit their intelligence. In this choice lies the equality of opportunity” (Noveck, 2013,67). In a collaborative creativity process, the focus should be on making it easier for people to find these areas to which they can contribute. Noveck (1999) also argues that one of the most significant challenges is to design a process that will catalyse a range of expertise.

Co-design has become popular as an approach to collaboration, with deliberation being a part of this collaborative approach, rather than an alternative to it. If collaborating, people will encounter deliberative situations. The Binary Deliberation Framework devised by Kanra (2012) offers a new approach to addressing this. Kanra sees deliberation as a process made up of both a generative understanding phase (Social Learning) and a decision-making phase – two distinct spheres of operation, but mutually inclusive (Kanra,2012). With binary deliberation, Kanra argues there is an increased likelihood of understanding and trust to form the development of a shared identity. However, this depends on the practice of social learning, which should be oriented in practical tasks which are more inclusive and less time bounded, yet purposefully organised and allocated their own space and time providing participants the opportunity to deliberate, without having the pressure to make a decision. This approach reiterates the importance **of creating a shared understanding** of the problem being addressed and mirrors Habermas’ focus on the rates of acquisition of information. The challenge then seems to be bringing imagination and creativity into the process of deliberation, not simply throwing ideas and opinions at one another but collectively coming together and building a shared understanding of a situation in order to produce a vision. In terms of a neighbourhood planning, reaching consensus about what the community/parish wants for the future may be unrealistic. But to produce a Neighbourhood Plan, a decision has to be made within a prescribed time scale and an end has to be reached: a ‘vision’ has to be submitted and this ‘vision’ should be one that reflects and is built upon the opinions and ideas of the community in its entirety. Kanra’s (2012) binary deliberation framework offers a more open discussion around the vision, before having to make the decision. However, a lack of understanding remains in how this is achieved practically: how to facilitate purposeful social learning, where people are able to discuss and in time understand others’ opinion and perspectives, in order to use these to collectively create a vision regarding the future direction in which they want their community to head.

Drawing on community development initiatives (Skidmore, Bound and Lownsborough, 2006), governments have begun to initiate “deliberative forums” to strengthen and consolidate public involvement (Phillips and Orsini, 2002). Practically, deliberative processes can be realized through citizen juries, community panels, planning cells, public hearings, consensus conferences, and deliberative polling (Piper & Dunbar, 2008). It has been suggested however, that these approaches often have the same limitations regarding who is invited or able to participate, who has the opportunity to speak and who chooses to listen, with more recent ‘digital forums’ having problems that mirror the more traditional face- to- face meetings.

Many are convinced by the potential of digital technologies (Wisniewski, 2013; Lathrop and Ruma, 2010), such as Web 2.0 and the devices that use this platform due to its ability to support communication. The use of digital technologies has opened the gates for previously unheard voices; these technologies connect many people to many people; they offer a fast and efficient space which speeds up acquisition of information and creates a platform where many can share opinions and ideas that are able to be seen by many others. However, a question remains as to whether these qualities are beneficial in terms of social learning and decision making moments tied up in deliberation. The final sections of this chapter look closely at these technological opportunities.

Fig. 9 highlights the purpose of the externalisation, once it has been created following a process of joint enquiry, it then needs to act as an artefact that is understood by the rest of the community, in order for them to deliberate and discuss it.

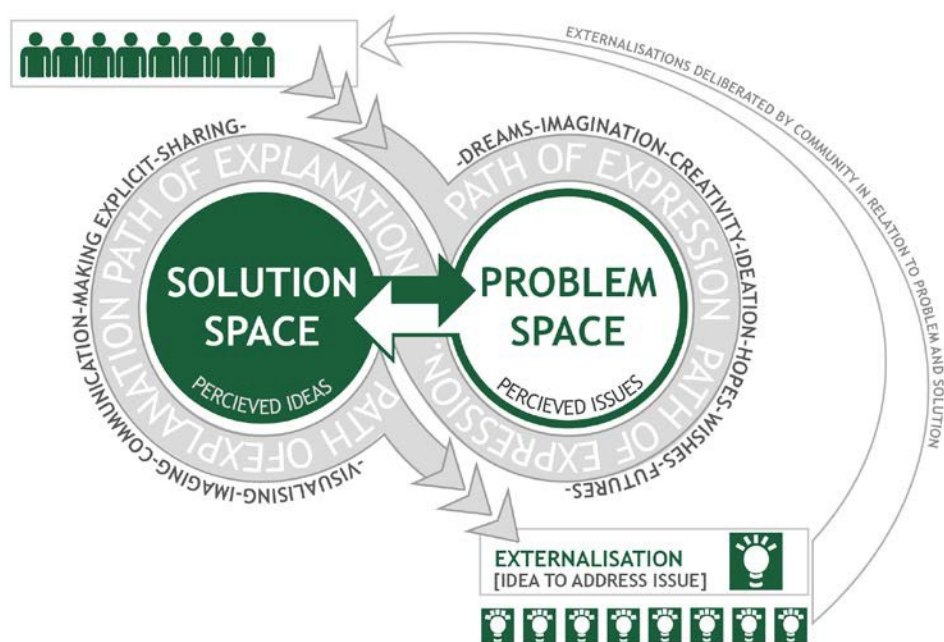


Fig. 9 Collaborative envisioning diagram, identifying the need for deliberation of ideas (externalisations), Duggan, K. (2014)

2.8 Deliberative Design

Certain areas of design already incorporate an element of deliberation within them.

Participatory design, co-design, interactive design or user centered design practices each support the stakeholders in becoming part of the design conversation. Co-design, 'co-creation' or collaborative design is subset of Participatory Design, where designers work with stakeholders to solve a problem from the initial stage of design until its completion. It differs from Participatory Design as it is used to imply that the end user is part of the design process, and not simply testing a system and providing feedback at the end of the process. There is also user centered design which Norman and Verganti (2012) term a philosophy that assumes innovation should start by getting close to users and observing their activities. This sees a movement away from design for people, but designing for what they need, interaction design has to become less about technology and more about what benefit and use it has for the users.

Sanders, in her paper 'Co-Creation and the New Landscapes of Design' (2008), considers the similarities and differences between North American and European approaches to design and the role of the end user in the design process. Sanders identifies that the 'user' or 'human' centered design approaches developed in the USA position the user as the 'subject' of the design solution, whereas European design approaches have evolved to consider the user as a 'partner' in the process (Sanders 2008). She suggests that in recent years' designers have begun to converge these approaches into what is now recognised as 'co-design'. One aim of co-design is to 'democratise' the design process and breakdown the traditional 'roles' of: user, researcher and designer. Instead, the various stakeholders of a particular project are invited to participate throughout the design process. The aim of this is to generate innovative outcomes, which embody the creative, analytical and expert insights of each member in the team. This enables each member to not be 'restricted by what they know' but to contribute to all aspects of the design process. Sanders and Stappers (2008) state that the role of designers is changing and that "we are no longer simply designing products for users, we are designing for the future experiences of people, communities and cultures who are now connected and informed in ways that were unimaginable 10 years ago" and this changes "how we design, what we design and who designs" as well as "the tools and methods that the new teams of co-designers will use" (2008, 12). The complexity of neighbourhood planning lends itself to the co-design

approach as it involves multiple stakeholders with different perceptions, knowledge's, cultures and ideas surrounding what the 'vision' should be for their community's future. The methods of Co-Design, Participatory Design and User Centred Design provide generative, exploratory techniques which produce outputs as part of an abductive process, enabling participants and stakeholders to work with each other by expressing perceived issues, sharing experiences, discussing and negotiating their roles and interests, to jointly create something which represents their different views and knowledge's (Steen, 2013), and in terms of Karnas' Binary deliberation, provides a space for the more open informal social learning. Yet the questions remain around what these new tools should do, and who will design them, and more generally, what the role of the designer and the value of design is within these social situations?

In their book, *Massive Change* (2004), Bruce Mau and Jennifer Leonard describe the future of design as **fundamentally collaborative**, and call for designers to play an active role in developing tools to support this collaboration. This view is supported by Tom Inns (2010) who goes further in stating that there are six emerging roles for designers in the future, namely: facilitator of thinking, mediator between stakeholders, co-ordinator of exploration, visualiser of intangibles, navigator of complexity and negotiator of value. Wilson and Zambertour (2015, p5), in their exploration of design literature and practices, add the roles of "co-creator, contributor to collaborative and interdisciplinary teams, generator of new design knowledge and developer of, and contributor to creative cultures". Manzini (2016, 53) believes that design processes are indeed "de-facto co-design activities, involving a variety of actors" and that the focus of design is now on "ways of thinking and doing" (meaning methods, tools and approaches). As a consequence, he believes that design now operates in three different spheres: Diffuse design, which is the natural human ability to adopt design approaches (the capabilities people have to design): Expert design, which is the professional designers who should be endowed with specific skills: and Co-design, which is the overall process resulting from the interaction of a variety of disciplines and stakeholders (ibid, p53). Yet he is concerned that the emerging design culture is a tangle of 'solution-ism' and 'participation-ism', in which 'participation -ism' sees the role of designer as facilitator and, as such, takes a back seat of merely collecting the opinions and wishes of actors on small pieces of paper and synthesising them (ibid, p54). Whereas 'solution-ism' consists of design activities which contribute to producing more a favourable environment for the birth and development of a multiplicity of other projects, even though they do not contribute directly and immediately to the solution of a specific problem (Manzini, 2016, p57). Manzini's understanding of co-design is that it is a social conversation which is

much more complex than a participatory design exercise; one which can be contradictory and antagonistic, sometimes resulting in problems and tensions in which different stakeholders bring specific skills and their culture. He believes it requires a **dialogic conversation** where actors are **willing** and **able** to listen to each other, change minds, and converge towards a common view and in this way some practical outcomes can be collaboratively obtained. He also states that the quality of these results depend on the quality of ideas that come up in the discussion and that the 'experts' should learn to listen and also propose their own ideas and visions. There is, of course, a danger in using the term 'expert' designers: as long as professional designers consider themselves to be experts, a hierarchy will remain during any sort of co-design process. However, rather than labelling individuals as experts, per se, what Manzini is referring to is the specific skills that 'expert' designers possess, which have been described by (Young 2012) as "having the capacity to look at other sources of knowledge and practices, and identify creative opportunities to structure them into new approaches", and that designers are increasingly able to work between disciplines to engage people with "possibilities of the new", namely what has been referred to as 'designerly ways of thinking'.

Designers, as facilitators, are arguably now more accountable for how the tools, processes and methods they design (for the purpose of facilitating and stimulating co-design activities) are utilised by participants and influence the outcomes which they produce. Ecological psychologist James Gibson (1977, 1979) proposed the idea that the environment denoted the possible actions a person could take. This led in the 1980's to the notion of affordances used in design (Norman, 1988) as a way of making it obvious to users what the possible uses of a product were. Initially defined by Norman as "the perceived or actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used... A chair affords ('is for') support and therefore affords sitting. A chair can also be carried. Glass is for seeing through, and for breaking". However, his view later changed in 2008 when he introduced the concept of 'signifiers', claiming that this is what designers should be concerned about over affordances. Signifiers were in Norman's terms "any mark or sound, any perceivable indicator that communicates appropriate behaviour to a person" (Norman 2013). Whereas affordances defined what actions were possible, "signifiers specify how people discover those possibilities: signifiers are signs, perceptible signals of what can be done. Signifiers are of far more importance to designers than are affordances" (Norman 2013). This means that the design of tools allows users to carry out certain actions, but also that design can capture what users perceive can be achieved. Further research by McGrenere and Ho

(2000) focuses on how the analysis of the direct perception of affordances has been mostly dealing with physical or virtual/physical actions (e.g. grasping a door handle or clicking on screen buttons), while little research has been carried out into how they support the possibilities for “non-physical” actions, such as invoking an abstract logical function, i.e. invoking creativity, imagination or creating a space to deliberate these ideas.

Section summary: Deliberation is arguably where individual visions become shared visions, through rational discussion and being open to others perspectives and experiences. This isn't to say that consensus is reached, but a new collective view (shared vision) is created which the community can move towards. The difficulty in achieving this is being able to facilitate a process whereby the opinions and ideas of different people are actually heard and considered and responded to by those with different opinions, and ultimately used in a generative, constructive way to create a shared vision. The role of designers is moving towards that of facilitators and creating the tools and interventions that support such problems (the problem of creating a shared vision) and work alongside the intended users to ensure they are able and willing to listen to each other, bearing in mind that whatever is designed will carry certain signifiers and affordances which hold limitations to what the users can achieve.

The signifiers and affordances of digital technologies are considered an exciting area, with the scope and availability of technologies in terms of communication and creativity has been firing the imaginations of many. The following section explores the possibilities they afford in terms of creativity and inclusiveness.

2.9 Digital environments for creative envisioning

Little is known about how effective new technologies are in overcoming the main obstacles of traditional ways to involve citizens in urban planning and governance (Kleinhans et al, 2015). In terms of digital technology supporting deliberation and collaboration, Stephen Kosslyn of Harvard's Department of Psychology believes that technology can reinforce the sense of working as a group by recreating some of the conditions of face-to-face work environments that build trust and belonging (Lathrop and Ruma, 2010, p56). Yet for Schuler (2010) deliberation has already been forgotten in online spaces, with online discussions often having no resolution at all, but merely “dribbling off into nothingness, leaving more frustration than enlightenment in their wake” (p95). Schuler's defense of this is that deliberation is a difficult, time consuming and confusing process where the “payoff” to participants is perceived to be far less than the effort expended. Current online applications created to support this process are therefore also difficult to design and implement, and need to be developed in a co-

evolutionary way, working with the communities who will be using them. Although these applications and systems are relatively new and the surface of the digital support for deliberation is only being scratched, there is according to Schuler, immense potential and he hypothesises **that if it were easier to participate in deliberative sessions and if the results were perceived as worthwhile then citizen deliberation would become more popular** (Schuler, 2010, 103). The way digital technologies are being used has been noted as mainly supporting self-expression, i.e. enabling people to get their opinions and ideas 'out there'. This gives the speaker the ability to share, and thus supports the speaker, but does not necessarily support the hearer or receiver of information. This ability to contribute or participate is not the same as deliberation, and access to an idea is not the same as exposure to it "The internet itself is not the killer app" (Lathrop and Ruma, 2010, P62); rather, the systems and processes that it facilitates us to design are its potential. Additionally, the ability of online platforms which enable many people to voice their opinions does not in itself assist deliberation as "diversification is not an end in itself, but a means of exposing citizens to dissimilar views and thereby providing citizens with evidence that individuals who hold views may have legitimate arguments for doing so" (Mutz, 2013, p84-85).

The other question is where could a digital technology intervention sit in supporting creativity and reframing? If imagination is shaped by the interactions between the inner and external environments, would digital tools not potentially have the ability to stimulate inner cognition, as described in the work of Panougiias et al (2013)? The creativity of agents is conditioned by the field, according to Bourdieu, leading to the concept of what Bourdieu terms (1983) the "space of possibilities", which addresses the factors that constrain and facilitate the user of a certain technology. This space defines "the thinkable and the unthinkable, the do-able and the impossible for agents in the field" and enables agents to "see possible courses of action and intervention", relating to Normans 'signifiers' (2013). Creative moments therefore are always "dependent on the possibilities present in the positions inscribed in the field" and creative action is part "habitual and embodied action that admits the possibility of intelligent and strategic improvisation, at least within existing cultural frameworks" and believes that digital technology possesses distinctive characteristics that result from an "underpinning process of innovation and creativity" and poses the question whether there is something distinctive and definable that can be termed 'digital creativity' (Panougiias et al., 2013, 3). In this sense a community resident interacting with a designed digital intervention could potentially be stimulated by what they see, hear and feel during that interaction which could act as a 'surprise piece of information' affecting their own frame. But then what do they do with this?

Athavankar (1997) believes that digital technologies may offer “alternative ways to represent information, but don’t develop imagining abilities” (1997, 39), suggesting that digital tools have their limitations at representing what the individual has already conceived, but no role in the conception. This view is supported by De Bono who considers the notion that ideas are to do with technical innovation as ‘curious’, and that it is more about changing attitude and approach by looking at things differently than the ways they have usually been looked at. However, Shneiderman (2003) disagrees with this view point suggesting that software aiming to support creative problem solving, such as envisioning, may support a number of tasks associated with the envisioning process (see Table 2).

1) Searching – browsing digital resources for inspiration	<i>(External influences as sources of insight)</i>
2) Visualizing – understanding and discovering relationships	
3) Consulting – intellectual and emotional support from mentors or peers	
4) Thinking – making new combinations by free association	<i>(Structural path aiming to understand and simulate alternate solutions)</i>
5) Exploring – what-if tools and simulations	
6) Composing – step by step artefact creation	
7) Reviewing – reflecting upon histories and sessions	<i>(situationalist approach to viewing work in relation to others)</i>
8) Disseminating – gaining recognition and sharing resources	

Table 2. Stages of Creative Problem solving, adapted from Shneiderman (2003)

Shneiderman (2003) argues that digital software may drive creativity by supporting one or more of the activities listed in Table 4, noting that general -purpose software already offers much value within the tasks of searching, visualising, consulting and disseminating. Hence, he argues for focused research efforts in particular within thinking by **free association, exploring, composing** and reviewing, stating that thinking by free association is indeed poorly supported by digital tools. He thus believes that tools should be designed to support lateral thinking by allowing the user more control and freedom to explore multiple possibilities and approaches instead of pursuing a single solution. This view is supported in the recent work of Davis and Gardner (2013) who, during their study of young people’s reliance on the use of software applications for smart devices (apps), claim that there are two types of apps: those which are ‘app enabling;’ and those which are ‘app dependent’. ‘App enabling’ refers to apps that allow

or encourage users to pursue new possibilities, while in contrast 'App dependent' refers to the use of apps that restrict or determine the user's procedures, choices and goals (Davis and Gardner, 2013). Further, they found those apps which were 'enabling' did not explain fully everything that the app could do, allowing the user to explore it for themselves and access what they could do with it and how they could apply it.

In terms of co-creation, the area of gamification is currently bringing together several of these elements (creativity, imagination, collaboration and deliberation). Gamification is the umbrella term for the use of video game *elements* (not fully fledged games) to improve user experience and user engagement in non-game services and applications (Deterding et al, 2011). It is essentially an approach to support 'games with a purpose', and identifying design principles that enhance motivational affordances of computer supported collaboration work (Jung et al, 2010). In persuasive technology, gaming aspects have been studied as a potential means to shape user behaviour in directions intended by the system designer, or to instill embedded values (Gamification Submit, 2011). Additionally, a growing body of research points to the significant role of social contexts in the constitution of video game play experience (Jung et al, 2011).

Gaming is being increasingly used to support community involvement in local issues. For example, in the app 'DoGood', Rehm (2015) adopts a gamification method to increase the number of people participating in civic activities and improve awareness of the range of activities out there by employing elements such as setting personal 'challenges' of which the success or failure is made visible to all others using the app, and score systems act as motivation. Regarding the more creative aspects, such as collaborative planning, simulation games have been used to imitate real decision processes in conflict situations in which people's participation is an important operational factor, thus taking into consideration behaviours of design participants in conflict situations (Wrona, 1981). Human participation became important to planning process in the 1980's, which saw Role Playing Games (RPG) becoming standard technique for conflict solving. Early simulations and games required access to servers and skills, which had been rare, but improved graphics and accessibility meant that they became more absorbing and easier to use. Role Playing Games (RPG) are used as sociological technique supporting mediations and can be a useful tool in consensus building for decision makers and planning professionals, suggesting virtual gaming technologies may be used both as a tool for simulation and communication (Hanzl, 2007, 13). However, as Hanzl notes, research in this area is limited and use is not widely applied in participatory planning due to lack of funds, politics of authorities and technical factors. Most examples show how computer tools may be used for

visualising the new development and not for the process of continuous public participation. However, Hanzl believes that there is great potential in the use of RPGs as collaborative software as they offer new potentials in communication and suppressing the barrier of 'non-professionals' in participating in a community planning process.

The virtual world games Second Life and Minecraft are two notable examples of gaming being used to engage people in creative planning processes. Foth et al (2009) used 'Second Life' as a tool to engage young people in urban planning and more recently, Minecraft has partnered with the United Nations Habitat programme, which aims to create 300 pre-built locations around the world that will be templates for community members to utilise to make decisions about future developments in a project called 'Block by Block'. Minecraft is an open world game, meaning that it has no specific goals for the player, allowing the user to choose which mode they play in: Survival mode, Creative mode or Adventure mode. The first of these is a competitive gaming realm, where the player has to defend themselves and their property against attack from other players. The creative mode removes the chance of 'dying' or having to find food and materials to survive, allowing the player the freedom to create at will, whilst the adventure mode enables the owner of the server to create custom made adventures, where they make their own rules of play. Minecraft revolves around building constructions out of textured cubes in a virtual space, and when in multiplayer mode, it becomes a shared virtual space that multiple participants can work in together. It is due to this 'shared space' quality that the works of Foth et al (2009) have identified virtual world games as being useful in providing a platform for collaborative community based design. They cite several reasons for this, including that such approaches increase telepresence, which is the 'sensation of being there' whilst in a mediated environment (Jesselsteijn, 2000) and the fact such games are easily accessible, and already used by many people of all ages (16,647,735 people have purchased Minecraft to date). Such games not only enable someone to imagine being in a certain space, but also, due to their sand box format, offer the freedom to experiment, which Ondrejka (2007) claims has led to unprecedented rates of innovation.

Nambisan and Nambisan (2008) believe that virtual co-creation systems, to be successful, need to offer four experience dimensions: Pragmatic (they have to be carrying out the activity for a purpose, to reach a goal); sociability (users have to be able to interact with others in some form); usability (participants have to be able to grasp how to use it quickly, before they become frustrated with it and give up); and hedonic (users have to find the experience enjoyable). These immersive environments such as virtual world gaming enable users to interact in synthetic worlds using a set of interaction facilities: such as moving, talking and building and

interacting with other characters (Paiva et al, 2005). This platform offers the potential to support a process incorporating role playing, personas/characters, scenarios and challenges within a single 'space' that is accessible by a number of participants at one time. Therefore, in terms of collaboration activities it allows everyone to experience the same (visual) problem at the same time and also the solutions/ideas people are putting forward to address it, offering possibilities to enhance deliberation and joint enquiry while removing 'production blocking' factors found in standard group consultation meetings. However, of the literature studied regarding the use of the virtual world environments, there were several notable limitations such as who these virtual world games appeal to. There is also criticism and concern surrounding the common 'gamification' practice of added 'rewards' such as badges and points to increase motivation, possibly replacing or displacing the 'real life' motivations that these virtual games represent (Nicholson, 2012), therefore trivialising the activity. It is also unclear where this software could fit into the process of envisioning and whether it alone has the potential to support creativity, imagination and deliberation required to produce a vision.

There are both positives and negatives surrounding the adoption of digital tools into a creative envisioning process, firstly people have to have the access to them, as well as the ability and willingness to use them. However, they do appear to hold the possibility of certain benefits that address the gaps in the literature. Firstly, they provide new 'spaces for possibilities', the space defines the 'thinkable and the unthinkable... the do-able and the un-doable' (in relation to the affordances they provide), much of the literature referred to having the right environment, space and time in order for people to carry out activities, technology may provide something new to address this. In terms of production blocking, the use of technology can support anonymity in having the ability to contribute opinions and ideas to a discussion.

However, certain people do not have access to digital tools and do not know how to operate them, therefore their use as tools to increase inclusivity needs further exploration within the specific context. There are arguments that digital tools make activities too precise and therefore are more suitable as presentation tools but not as tools to imagine with. Yet new developments in software are removing such limitations. The over prescriptive quality is also referred to in 'App enabling', which describes applications which expel this over prescriptive approach and do not explain fully what an app could do, allowing exploration and pursuing of new possibilities, keeping the user engaged for longer. However, all software and apps are designed, as are the interactions that are possible, meaning that what a user can create on it has to remain in the limits of the affordances.

Many digital technologies are web based, i.e. the user has to be connected to the internet to access them, reducing the locations in which participants can use them. This is a limiting factor in terms of the rural communities who work with AirS, where Wi-Fi and 3G technologies are not as well supported as in urban areas. This suggests a growing need for an app or a software application which can be downloaded onto a computer or smart device and used anywhere. Apps are used with the purpose of aiding the user in performing a certain task, this currently covers everything from games, music to finance and are, as referred to by Davis and Gardner (2013), shortcuts in life activities. Their popularity continues to grow and by 2013 the Apple App store reached the 1 millionth app mark and saw over 60 billion apps being downloaded; the app market place for iOS, Android, and Windows Phone platforms have made it attractive for developers to deploy apps and easy for users to discover and start using many network enabled apps quickly. Furthermore, the appearance of tablets and mobile devices has increased the diversity in apps and their user population (Xu et al., 2011). Xu et al (2011) have found that smartphone users are increasingly shifting to using apps as “gateways” to Internet services rather than traditional web browsers, as they are a more direct route to gaining the information, or completing the task in which they are engaged.

Designing with Intent

To design an intervention, or a technologically supported intervention, which assists users in carrying out a certain task it is worth looking to the field of Design with Intent (Dwl). Dwl is an example of how affordances and signifiers have been used, whereby the interactions are facilitated by a product, system or environment, and shape users’ perception of what actions are possible (Lockton et al, 2008). It can be argued that all design is inherently persuasive in some way (Buchanan, 1985; Redstrom 2006) in the sense that artefacts, environments and systems around us contain socially constructed ‘scripts’ for users (Akrich, 1992). However, systems intentionally designed to influence behaviour that is different from that usually associated with the situation, or in situations where a user would not otherwise have a strong idea of what to do, represent a degree of design intent beyond this. Any such products will, of course, always be used within a context involving users’ own intentions: emergent behaviours, intuition (Blackler et al 2009), appropriation (Salovaara 2008) or prior experience (Chamorro-Koc et al. 2008) mean that designers’ intended use (or usability) is not always translated into user behaviour.

Persuasive Design sits within the wider field of Design with Intent (Dwi) and applies elements of rhetoric and conditioning to intentionally influence behaviour (Fogg 1999, 2003), yet distinguishes itself by the fact that its research focus is on persuasion with intended social benefit, whereas in Dwi, the intent is often commercial benefit (Lockton et al, 2008). First initiated in 2002 following the publication of BJ Fogg's book *Persuasive Technology: Using Computers to Change What We Think and Do* (Fogg 2003), Fogg first defined the field as 'persuasive technology' as "interactive computing systems designed to change people's attitudes and behaviours" (ibid, 1). From this point onwards the field has brought together disciplines of design, computer science, social sciences, psychology, cognition and philosophy to achieve sustained, long-term, positive behaviour change to benefit services in health, safety, and education. Of course, just as the designer of an object or system has made certain decisions, shaped by their perspective, so does the user (Redstrom, 2008). The user can either accept the proposed way of interacting with the artefact, or not – choosing instead to refute or modify depending on their own position. The results are unpredictable. Yet, whether the designed 'things' are considered inherently persuasive or not, they are designed with a certain perspective, with a certain goal, to generate a certain outcome; they possess an embedded argument, whether intentional or not, and this notion should be developed more consciously. Even if the aim is not to persuade people, we should understand the persuasive dimension of the dialogue between the object and user (Redstrom, 2008). The following section, therefore, investigates how persuasive design and 'architectures of systems' can operate by understanding the theories surrounding behaviour change.

2.10 Behaviour Change

The argument put forward by Stanton and Barber (1998) proposes when designers design 'a thing' they are also designing user activity, an activity that would not occur independently of the designed 'thing' (be it process or object), this is an idea which has seen the growing recognition that "designers are in the behaviour business" (Fabricant, 2009) and as such should have a greater understanding of behavioural science. As this research is exploring how to support or stimulate an individual's willingness to undertake visioning as part of a Neighbourhood planning process, it's important to identify what is known about what drives people to act.

The MOA framework (Rothschild, 1999) explores a targeted stakeholders 'Motivation, Opportunity and Ability' to adopt a certain behaviour. It has been proposed the MOA framework presents a useful approach for interventions aimed at social issues (Andreasen, 2002). Within this framework **motivation** is categorised as being cognitively based (Plotnik,

2002), and is formed of intrinsic motivation i.e. motivation inspired by the actual task itself, due to the enjoyment people have of the task or of completing the challenge set by it, regardless of any payoff (Deci, 1975; Ryan and Deci, 2000) and extrinsic motivation, i.e. the individual's drive to engage in activities and adopt behaviours purely to obtain incentives or external rewards, even if they may not necessarily enjoy the tasks (Reeve, 2001). Motivation also incorporates Self-Determination Theory, which implies that the basis of much of human behaviour is the need to be effective in controlling one's environment (Ryan and Deci, 2000) i.e. when individuals initiate their own behaviour and/or feel in control, they show active engagement and take personal responsibility for their goals and actions. Alternatively, when not in control they behave in ways that are relatively passive and reactive, and show little personal responsibility for their goals and actions (Ryan et al, 1997). **Ability**, in this framework, refers to an individual's skill or proficiency at solving problems or their knowledge of how to act (Pieters, 1991; Rothschild, 1999). However, when the actual task knowledge was lower than the perceived task knowledge this did not result in high quality performance (Pieters, 1991), therefore there is an additional drive to ensure that perceived knowledge and actual knowledge are highly correlated. **Opportunity** is defined as the extent to which the consumer can process information without any restrictions (Andrews, 1988; MacInnis et al., 1991). In addition, inadequate opportunity is most often observable when consumers want to act (are motivated) but are unable to do so because there is 'no environmental mechanism at hand' (Rothschild, 1999). In a social marketing context, opportunity occurs when the consumer is not limited in the desire to act by factors in the external environment.

Linked to an individual's motivation is their self-efficacy, a behavioural concept central to most social and psychological theories of planned behaviour and understood by Bandura's model (1977) as being an individual's belief in his or her capacity to execute behaviours necessary to produce specific performance attainments (Bandura, 1977). The four main sources of influence on this are: Mastery: whereby successes build belief in personal efficacy. Social Value: whereby seeing people similar to you succeed raises own beliefs. Social Persuasion: a potentially powerful, but two-sided, motivator, whereby people who are persuaded verbally that they possess the capabilities to achieve activities are likely to mobilise greater effort to and sustain it. However, people who have been persuaded they lack capabilities tend to avoid the challenging activities. Emotional State: whereby people's emotions come into play, for example 'mood' can affect people's judgement of their personal efficacy; positive moods enhance perceived self-efficacy whilst despondent moods reduce it.

The UK Government report ‘GSR Behaviour Change Review’ (Darnton, 2008) provides an overview of over 60 sociopsychological behaviour change models and their uses. The report identifies that most models are based on 6 common, yet variably defined, factors.

Factor	Role in behaviour
Personal ‘attitudes’	Similar to self-efficacy, attitude tends to be conceived as “the product of a deliberative calculation weighing an individual’s beliefs about a behaviour with the value they attach to those characteristics” (Darnton,2008, 12), i.e. an individual's willingness to engage.
Subjective, social and personal ‘norms’	Identified as “a guide to how we should behave, and how we expect others to behave” (Darnton, 2008, 205). Social norms provide a ‘feedback loop’ between individual actions and the response from our peers and others in society
Agency	This is “an individual’s sense that they can carry out an action successfully, and that their action will help bring about the expected outcome.” (Darnton, 2008, 13). This determines how much effort we put into a behaviour, or whether we attempt it at all.
Habit	This refers to automatic behaviours that we undertake frequently. We are not necessarily aware of our habitual behaviours and many become ‘tacit’, ‘automatic’ actions which are either learned or instinctive. The ‘automatic’ element of habit differentiates it from repeated behaviours <i>ibid</i> , 13). This offers opportunities for bringing behaviour change; habits are undertaken without thinking, so if an intervention is incorporated into an existing activity, people are more likely to adopt it.
Emotion	Some models identify that emotion can have a powerful ‘overriding’ influence on our intentions and actions; fear for example can be an overpowering emotion that will override other intentions (<i>ibid</i> , 14).
‘Contextual factors’	These are factors which an individual cannot control. However some contextual factors can be influenced by an individual’s perception: level of understanding, ability, access to information and cost, for example

Table 3. The 6 main factors of what affects behaviour, inspired by Darnton (2008)

Utilising these factors to design with intent, in order to lead an individual or group to take a certain action, is concerning for several ethical reasons. This study seeks to provide people with more accessible means through which to participate with a process they have a right to

be part of, yet it doesn't want to dictate the decisions made through it but merely open up the conversation. This is a common concern and looking more specifically in the area of civic participation there have been 'softer' tools developed that look to work more closely with citizens, to understand how they are thinking and encouraging them to take – and to own – 'better' decisions (John et al, 2011). There are two schools of thought on how to achieve this: nudge and think. According to John et al. (2011) these two strategies draw on different traditions of research, yet both share an understanding of the human predicament, which is that people are boundedly rational. That is, people "seek to economise on the use of information, both when they are reflecting on big problems to routine civic actions" (p21) and are all constrained by the fundamental human problem of processing information, understanding a situation and determining consequences. Our cognitive capacity has limits, when faced with a decision people do not consider every available option, nor always make a great choice that is optimal to their utility (John et al, 2011). *Nudge* is about giving information and social cues so as to help people do positive things for themselves and society and framing the choices they can make to help make decisions. Whereas *think* argues that it is possible to "stimulate citizens to think through challenging issues in innovative ways that allow for evidence, and the opinions of all, to count" (p22). This strategy rests on the assumption that people, if given the right information, an appropriate amount of time and an appropriate context, can make the best decision regarding what is good for them and fellow citizens, "Solutions can be found to challenging issues, and the pathways to behaviour change can be illuminated and smoothed, because citizens have been involved in the construction of the answer" (ibid, p14), which John et al. argue increases the legitimacy and likely effectiveness of any solution.

Nudge and think constitute different responses to the challenge of bounded rationality: Nudge tries to go with the grain of human behaviour: understand the short cuts and heuristics that people use to make decisions and then seek to bend or influence their environment (i.e. their internal choice architecture) to get behaviour that is more beneficial for society and the individual. In contrast, a think strategy suggests that a better institutional framework can be created so that an individual can overcome certain limitations of bounded rationality. **"If bounded rationality is heightened by lack of information and lack of attention to the viewpoints of others, then public agencies might create the conditions in which these are taken on board, in this way nudging citizens to think."** (John et al, 2011, p26). Overall, a think strategy aims to promote free and fair deliberation between citizens. As Fearon comments, 'democratic deliberation has the capacity to lessen the problem of bounded rationality: the

fact that our imaginations and calculating abilities are limited and fallible' (Fearon 1998: 49). The gap here is in understanding how these conditions can be created.

Neighbourhood Planning is an institutional framework, an 'invited space' of participation, designed by the government and bounded with a limited scope of freedom for participants (Parker et al, 2015). As such it is merely an invitation to become involved and not a request, therefore if individual communities don't have the motivation, the ability or opportunity to do this, or are not nudged into believing they are able (and the levels of each will differ from one neighbourhood to another) they once again won't become part of the conversation. Without an interest in or knowledge of planning procedures or their impact, people may not be eager to invest time and energy in participating (linking to their self-efficacy). To this end, many academics and policy makers from across the social and policy sciences have occupied themselves with this question of role and potential of the community in contributing to local policy and agenda (Parker et al, 2015). Many believe that what is **needed for more inclusive, collaborative and legitimate planning to be fostered are structures, processes and skills to support communities**. Yet others believe the idea that conflicts can be appeased by the 'opening up' of the public sphere, whereby people with different interests can make decisions about issues that affect them, is naïve (Parker et al, 2015).

What the literature does identify is the varying **capacities** communities possess to successfully carry out his process, citing resources, skills and economic stance as factors. This notion of the community's capacity, is well researched within community development literature, and has been used more recently within the neighbourhood planning context (Gunn et al, 2015). Described as a "set of dynamic community traits, resources and associated patterns that can be brought to bear from community building and community initiatives" Norton et al (2002, p205), the origins of the term 'community capacity' come from international development during the 1990's; introduced as a conceptual approach to development that focuses on understanding the obstacles that inhibit people, governments, organisations from realising their development goals, while enhancing the abilities that will allow them to achieve measurable and sustainable results. It often refers to strengthening the **skills, competencies and abilities of people and communities**. The ideas and dimensions identified by Goodman et al (1998) have been adapted Gunn et al (2015) in regards to neighbourhood planning and its potential usage as an analytical tool. Empowerment, capacity and competence are labelled as the factors required by communities to take control of their own plan.

Section summary: If an intervention is to be designed to support communities in producing a shared vision, it is important to understand what is known about why (or why not) people take the actions they do. Motivation, ability and opportunity were identified as being necessary for participation, so they should each be addressed. Additionally, individuals need to believe they can achieve the task, it is also beneficial if the intervention fits into their daily routine. Finally, if bounded rationality is reduced by increasing the information an individual has, or if they are exposed to the viewpoints of others - this can nudge the individual to think, explore, and ask questions about the issue or solution (or vision) at hand. What is currently unknown, is whether these conditions can be designed into a process?

The Venn diagram (fig. 10) and list below identifies the areas of the MOA framework alongside the community capacity dimensions and key elements noted throughout the literature, in order to begin to understand where gaps and possibilities are in understanding what a tool is required to do to support an inclusive envisioning process.

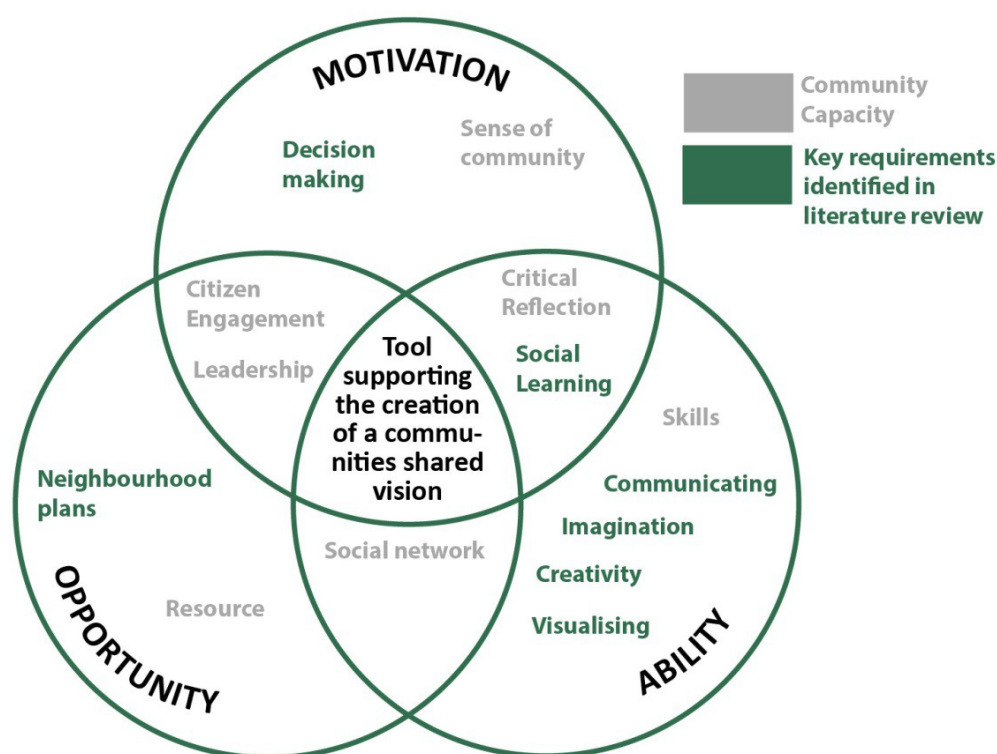


Fig. 10 Diagram of activities in relation to MOA, Duggan, K. (2016)

Motivation: Sense of Community

There needs to be a high level of concern for community issues and a sense of connection with place and people, there has to be a concern and investment into the future of the place and

individual lives. This is bought about through community dialogue, social arrangements which reflect increasing levels of commitment, responsibility, formal and informal networks and gatherings. If people are going to engage and participate they have to feel that the contributions, they make are purposeful and that it will make a difference to the outcome.

Opportunity and Motivation: Citizen Participation

There needs to be engagement (either through political, civic or faith based activities) with a diverse network of people in order to enable different perspectives to be included in the collective action, to ensure the needs of all citizens are defined and solved. Therefore, there cannot be a single approach for engaging people, there needs to be multiple levels of engagement in order to make the conversation accessible for a variety of people. **Leadership** plays an important role in this as there should be both formal and informal leaders to provide direction and structure for participants, ones who can attract a diverse range of people and ensure group meetings provide all attendees with opportunity to speak. The question of who leads, how they invite participation, how they are representative of those people who are not present and how they promote conversation between the leaders and none leaders, will have an effect on whether people want to participate and feel they are welcome to.

Opportunity: Resources: The resources can be economic, social, natural, knowledge based and human capacity (this includes social capital and the ability to generate trust). For a Neighbourhood Plan to form all these resources are required.

Opportunity and Ability: Social Networks: The focus here is on how individuals and community groups work together, form relationships and reciprocal links through interactions, and how new associations can be formed to support a cooperative decision making process.

Ensuring that those not in decision making positions can approach those who are, and will be heard by them. Here a tool or process could be an enabling factor in providing people with the environment through which they feel they are able to connect with other people to discuss ideas, the space and the ability and know-how to confidently feel they can contribute within this space in vital.

Ability: Skills: In order to become part of the process, people require skills to engage constructively in some group conversations, to collect and analyse data, to problem solve, to design and implement interactions, to communicate, to deliberate, as well as specialist skills such as policy writing and planning knowledge. This area also covers the abilities noted within the Path of Expression and Path of Explanation, imagining, creating, and visualising and making

explicit ideas are all skills that need to be supported by the designed tool.

Ability and motivation: Critical reflection: This describes the ability to reflect on the assumptions underlying our and others ideas and actions, the ability to reason logically and scrutinise arguments for ambiguity, the ability to understand how forces in the environment influence both individual and social behaviour. There should be a creation of a learning culture where people challenge their own assumptions in order to accommodate new ways of thinking and new ideas. This links to the notion of frames, above all else, in order to carry out a collaborative creative process regarding the place they live, people need to be aware of their own frames. This links to Social Learning and the creation of a shared understanding – from which a shared vision can arise.

**List devised from (Goodman et al 1998; Norton et al, 2002; Gunn et al, 2015, Beckley et al, 2008)

2.11 Synthesis

The aim of the research is to address the democratic deficit in the public decision making process that is creating a shared vision for a community's Neighbourhood Plan, focusing specifically on the inclusion of young people, and the potential of digital technologies in tackling this. The literature review has sought to better **understand what constitutes visions and shared visions** to reveal how inclusive decision-making processes can be carried out, in order to identify the gaps in knowledge that currently inhibit their creation. The review has also considered how the design of a digital tool could aid in supporting collective envisioning activities and in addressing these knowledge gaps.

Within planning, community development and design, the creation of a vision is widely viewed as a beneficial activity, and one which engages more people than other approaches. It assists in forming an expression of an ideal future state, a notion to aspire to and one which can inform choices and future decisions to take. As such it is transformational, ideally stimulating change for the better. Its use within neighbourhood planning denotes that communities are collectively responsible and in charge of their own futures, and provides an activity through which members of the community can manifest not only their issues and concerns through the creation of future visions, but their hopes and ideas too. The value of a collective social and shared construction of a vision is key to the success of this process (Celi and Rudnik, 2015). It also, perhaps more importantly, offers an alternative to the perception and cognitions presented by decision makers (i.e. those in power), presenting viable alternative ideas that question the status -quo (van der Windt, 2013).

In breaking down the process of 'envisioning' (the process that produces a 'vision'), two distinctive sides of the process were identified, namely the 'Path of Expression' and the 'Path of Explanation', whereby the Path of Expression requires conceptual creativity, imagination, and empathy, which are stimulated by *deep* reflecting, *deep empathic* listening and identifying *deep* issues focusing on the implicit knowledge and experiential knowledge possessed only by people with the lived experience of being a community member. The path of Explanation however, is concerned with the communication and clarification of the ideas created, through visualisation or imaging; its role is to make explicit the more implicit side of envisioning.

Design thinking was used as a lens to approach problems in a design based manner. Within the activity of envisioning the future of a neighbourhood, the problem is not clear or definable as it is perceived differently by different residents. Therefore, the creation of a shared vision can be perceived as a 'wicked' problem, as there is no single 'right' answer and no indication as to

when the vision is complete. The literature indicates that a pragmatic design approach, which consists of a situation specific engagement back and forth between the problem space and solution space, would be most suitable. A pragmatic approach enables participants to move between the problem and solution space to ensure that solutions do not generate further problems, eventually enabling the participants to frame problems in new ways, by seeing them in relation to a future anticipated state. This ability to reframe has been identified as being key for several reasons: frames can be described as the lens through which individuals perceive reality, and individual visions are limited by these, therefore in order to stimulate imagination or creativity people need to be prompted to view the world beyond their own frame. The methods for achieving this relate to de Bono's 'lateral thinking' and Boden's 'knowledge bundles' as it is all about escaping current patterns of thought and seeing something in a new way or order to present unlikely information together, bringing unrelated ideas together and producing something new. It also relates to imagination (which is considered the formative power of creativity), despite being less understood, the literature still points to the breaking of patterns and normative thought, i.e. through empathic projection (which is viewing the world from someone else's point of view), which is arguably another method of reframing.

When an individual can only see a reality through their own perspective, the problems they perceive will immediately shape the solution they believe is most suitable for addressing it. This may be adequate for simple direct problems, but in wicked problems this then narrows down the solutions that are considered, some of which may be more suitable. Having the ability to reframe enables a more abductive sense making process, whereby the exploration within the context and environment leads to an increased knowledge to inform the perceived problem and solution. This new knowledge could come from understanding how a problem is perceived by someone else (empathic projection) or from a different interaction within the context. Stories and narratives have been noted as being useful in engaging people in others' perspectives and in making frames more accessible.

The biggest gap within the literature is to understand how an individual can initially identify their own frame and, more importantly, realise that they have a frame at all. This is the prerequisite to reframing: if an individual cannot identify that their view is limited to their own frame they will not be able to appreciate that the views of other are defined by *their* own frames. Individuals identifying their own frames is important in terms of personal creativity and imagination, but the ability to recognise that others have their own frames is paramount in strengthening the legitimacy of others' perspectives and opening up conversation and willingness to listen to a range of perspectives. This will also assist collaboration, which is

important in the creation of a shared vision, not only for the purpose of creating a shared understanding of the situation from which to build a preferred vision, but also when dealing with complex problems, which requires the knowledge of many as opposed to a few. The idea of Distributed Cognition (Hutchins 1996) refers to how thinking involves others, the environment and tools people use, and requires externalisations. Externalisations relate to the 'path of explanation' and are there to communicate what is happening internally - externally, via a shared language (visuals are often felt to be most useful in order to quickly and succinctly understand the intended message, the use of story -boarding, sketching, profiles, prototyping models are just a few examples). Essentially, an externalisation should be something that explains a vision or idea that others can interact with, but also as a measure to describe what is going on in someone's head in order to understand whether an intervention has had any effect on imagination of creativity.

Joint enquiry was also a key activity in the creation of a shared vision, not just for collectively generating ideas, but in order to form a shared understanding of what the problem really is. Again this is related to frames, the understanding of others' perspectives in order to find similarities and shared concerns. To carry out a process of joint enquiry and create a shared understanding and ultimately a shared vision requires deliberation and discussion. The literature identified the importance of Social Learning in reaching this shared understanding. Social learning occurs through social interactions and requires a demonstrable change in understanding, which is seen in the individual and beyond. The key element of this two-phase deliberation approach (Binary Deliberation) was ensuring groups have the space and time to carry out social learning, in order to create moments of decision-making. This was supported by 'fusion of horizons', whereby nobody is fully detached from their subjective views, yet they arrive at a new juncture through learning without specifically striving for rational agreement. The ability to deliberate was also seen to be affected by the acquisition and efficiency of information and the level of trust individuals had in it.

In terms of a designed tool which facilitates this process, the notion of affordances needs to be addressed, affordances can shape how a tool is utilised, and as a result may inform the outcome of a person or group of people interacting with it. This tool or designed process seeks to support and encourage people to reflect on their own frame through which they perceive reality, and to acknowledge that other people have their own legitimate frames that are all equally valid. It also seeks to support open discussion around what are considered issues with the community and support them in collectively coming together in generating a shared understanding and ultimately a shared vision of how this should be addressed. As described in

the Venn diagram, fig 10, in order to ensure a tool achieves this, it has to meet certain criteria in the areas of motivation, opportunity and ability. First and foremost, it needs to support people in reflecting and identifying their own frames. Secondly, it needs to support a process which facilitates the individuals in using this starting point to reframe their ideas in order to understand how they can be more creative in working through the lens of other perspectives in order to form a shared understanding. Finally, questions remain about how, once individuals have created a vision, they are able to translate their own ideas into a shared vision.

Therefore, this research sought to address the gap in knowledge concerned with understanding whether a digitally enabled envisioning process can be designed to support a more creative, meaningful, community vision. A vision which moves beyond the outcomes produced by meeting hall consultations, ballot boxes or surveys, and other tools and resources listed in Appendix B which, despite gaining and sharing opinions, in many cases failed to support people in externalising their hopes and ideas necessary for the creation of a vision. The outcomes they produce are also often defined and limited to the options and perspectives the decision makers and 'usual suspects' put forward. This research seeks the formation of a vision which is created from a shared understanding of a situation or problem, in which the ideas are developed through a willingness and ability of actors to listen and understand the perspectives of others. It aims to discover the value of digital tools in supporting people to reflect on their own frames, and prompt them to consider alternatives or generate new ideas, in a way that existing tools and resources seek to do. This is in order to address the current vacuum of community development and neighbourhood planning tools that go further than collecting multiple opinions, and instead, support structured discussions which lead to shared understanding of a situation.

The research also seeks to understand whether the use of digital tools can support a more inclusive envisioning process, in order to bring in groups which are currently disenfranchised from local decision making processes (in this case, young people). To produce a practical tool or resource that local councils can use, in order to assist them in carrying out meaningful engagement, and address the lack of knowledge over what good engagement can be (Coleman and Firmstone, 2014). The research also explores the role of digital technologies in producing communicable visions which can share ideas that are understood and accessed by the many, in order to open up deliberation, to generate a shared vision. It also seeks to develop understanding around whether the use of digital technology supports the formation of outputs that community members would interact with, trust, or pay attention to, and why? And how could these visions be integrated into Neighbourhood Plan submission?

2.12 Research Questions

In order to address the gaps set out in the previous section, the following research questions will be answered.

RQ1: Can undertaking a digital envisioning process support a community in creating a more inclusive and meaningful 'shared vision' for the future of their neighbourhood?

RQ2: Can the co-design and use of a digital envisioning process stimulate imagination and empathy, to facilitate the generation of a more creative vision?

RQ3: Can the co-design and use of a digital envisioning process generate more inclusive and communicable visions of community members?

Chapter 3: Methodology and Methods

This chapter describes the methodology selected to address the research questions, detailing why the methodological approach is most suitable, and describing the methods used to generate the data required to address the research questions. Ethical considerations will also be addressed to ensure that appropriate research practices are identified. Finally, the procedure of the study and how it was implemented, including specifics surrounding recruitment, conduct and analysis of the study, will be described.

3.1 Methodology

When designing a research methodology to address the research questions, it is important to identify the ontological position in which they are framed. Starting from an ontology in which, 'reality' cannot exist outside of human experience, the approach to addressing these questions cannot be discovered objectively, but will be formed from the subjective experiences of individuals carrying out the task of creating a vision. Therefore, this research will be carried out from a relativist perspective.

To develop a greater knowledge of how 'shared' visions might come about, and how the introduction of digital tools/ processes play (or don't play) a role in supporting this process, it will be necessary to be able to interpret the interactions, experiences and outcomes of those within these situations, i.e. the users of the processes and tools. This leads to the epistemological position of the research: since the researcher cannot be separated from the research, understanding will be constructed during the research process based on an interpretations of the findings (Cousin, 2009). The epistemic position is therefore interpretive. As I seek to gain understanding of how a designed, digitally enabled envisioning process plays a role in the cognitive abilities and behaviours of people during the generation of a vision, I will be exploring the interactions between person and artefact. The findings (or data) being interpreted cannot simply be collected, as they are generated by the interaction between the artefact and the user. Therefore, more qualitative data generation methods will be employed. Qualitative research is a loose categorisation of approaches to data generation **that explores themes, stories narratives, languages and the intricate details of people and their interactions.** Data can be generated from texts, notes, images, recordings, transcripts and is used to generate new ideas, theories and meanings. When practised in conjunction with empirical research, qualitative research can provide outputs which are both comprehensive and highly detailed (Cousin, 2009). Qualitative methods tend to generate a lot of 'noise' (volumes of information); therefore, advanced levels of interpretation are needed to deduce meaning, which makes

analysis challenging to ensure that outcomes are trustworthy and robust. As such the methodological premise of the paper is to **explore whether the creation of a shared vision can potentially be enhanced by a better understanding of some of the stimulants, abilities, affordances, mechanisms and processes supported by digital technology.**

Qualitative data is a descriptive data that is often generated from the perspective of the user (in this case, the community member engaging with intervention) and can be generated using interviews, diaries, observations, ethnography focus groups and action research. The data that this research will generate is that which describes the experiences, thoughts and actions when interaction occurs between individuals and a digitally supported process (i.e. a constructed tool) and therefore can be considered as Constructive Design Research. Constructive Design Research requires the building of an artefact, either practical or theoretical, that addresses a domain specific problem in order to create knowledge about how a problem can be solved, understood or explained. It provides results which have both practical and theoretical relevance and is often required to solve several related knowledge problems surrounding feasibility, improvement and novelty. It has an emphasis on the theoretical relevance of the construct i.e. what elements of the solution are central to the benefits and how can they be presented in the most condensed form to demonstrate that this is indeed research and not merely design. In this research the design and construction of a digitally supported process (the artefact) that will take centre place and will become the key means of constructing knowledge. The value lies in not only the construction but also the 'doing things', where observations made possible through observing people interacting with the artefact in a specific environment (Koskinen et al, 2011) The 'contribution' in constructive design research is concerned with **improving thinking and understanding**, and not just in making discoveries.

Constructive Design Research is often carried out in collaboration with other domains, and as a result has links to social sciences in design, psychology and design, design history, aesthetics and philosophy, and practice based research, therefore methods associated with it are informed by these practices. Constructive Design Researchers have moved beyond the theoretical and philosophical beliefs of Constructivists (those whose claim knowledge and society are constructed as opposed to organized functionally around a certain purpose), by focusing on the more tangible insights gained from building something and putting it to use. Due to this diverse influences, experimental research is the most common choice for Constructive Design Researchers and often consists of various activities, theories and methodologies.

The figure below (fig.11) sets out how a constructive design research approach will be structured within this research. Whereby, following a preliminary study, an Envisioning Framework (designed process - the artefact) will be the means through which data is generated. The interactions participants have with this Envisioning Framework, through workshops one - four, will produce data that will contribute to knowledge surrounding collective envisioning, address the research questions, and this data will be used to develop the design of the following iterations of the Envisioning Framework (EFV2 and EFV3), in order to produce an artefact that can practically contribute in assisting communities to create shared visions.

Study design

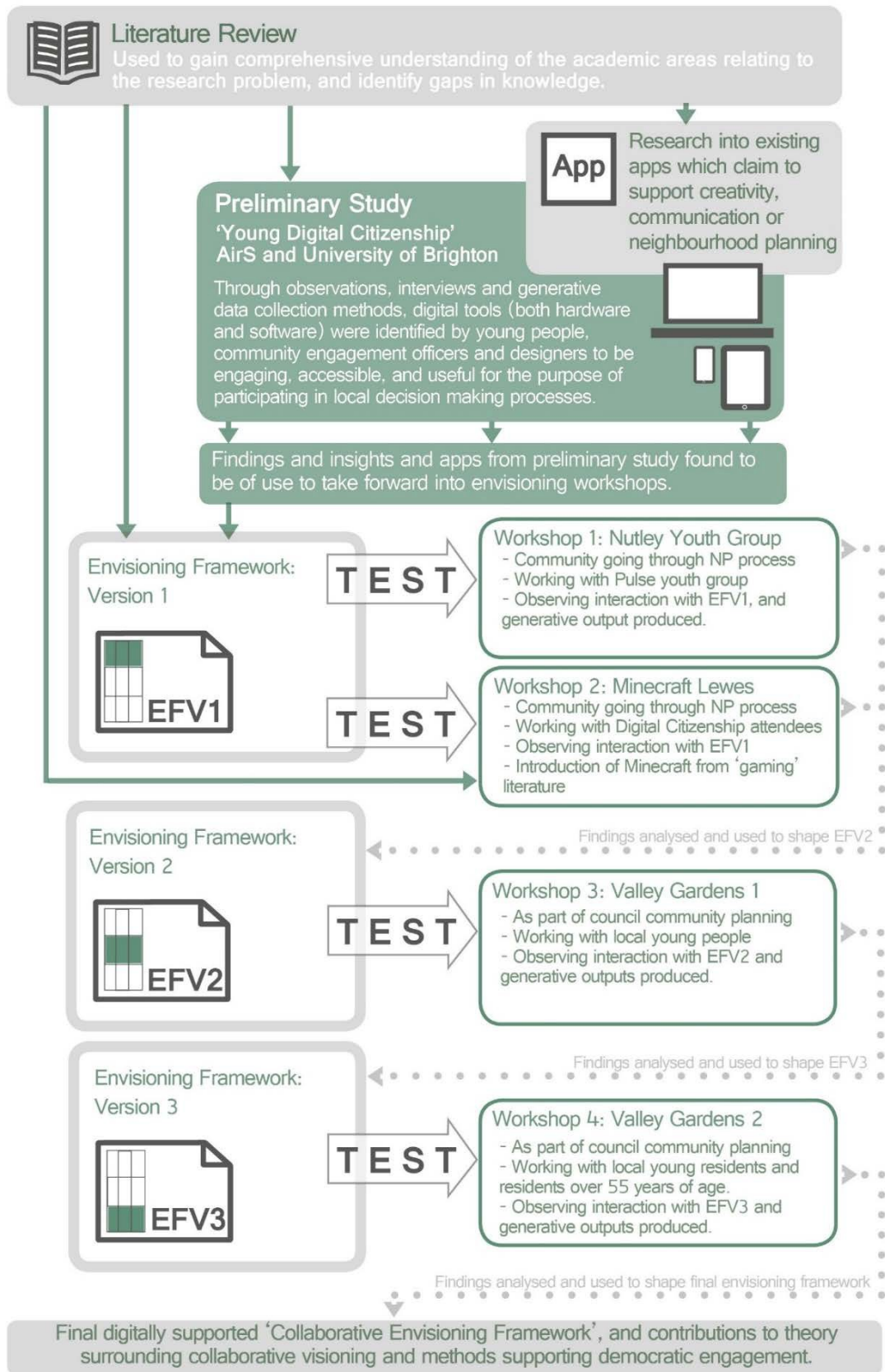


Fig. 11 Diagram of Study Design, Duggan, K. (2016)

The selected constructive design research, is a subset of the larger more general Design Research domain, specifically Research through Design (RTD). The justification for this new domain lies in its unique approach to generating knowledge through framing the practice of **design research as a broad culture of both inquiry and action**. The approach asserts that rather than focusing on problem solving to avoid undesirable states, designers work to **frame problems in terms of intentional actions** that lead to a desirable and appropriate state of reality (Nelson and Stolterman, 2003). In the view Nelson and Stolterman, design is a unique way to look at the human condition and is understood through reflective practice, intellectual apperception and intentional choice. Essentially they argue that this new culture promotes a ‘designerly way of thinking’, perceiving that design is the ability to imagine “that-which-does-not-yet-exist” and make it appear in a concrete form as a purposeful new addition to the real world. Cross provides a clarification of what good design research is, stating that it has to be: **purposeful by addressing a problem which is worthy of investigation, inquisitive and seek to acquire new knowledge; it has to be informed and conducted from an awareness of previous related research; it has to be methodical and planned and carried out in a disciplined manner; it should be communicable and generate and report results which are testable and accessible by others** (Cross 2007, 126).

Within the discourse of Design Research there are considered to be three different approaches: Research for Design, Research through Design and Research about Design (Frayling, 1993). In order to address the research questions, a Research through Design approach is identified as being most appropriate in generating the data required. Research through Design is an applied approach which seeks to provide an explanation or theory within a broader context, whereby the artefact becomes “a vehicle for acquiring and shaping knowing” which in-turn assists in future design activities (Downton,2003, p77). As such, it is both derived from and valuable for practice, i.e. in gaining knowledge around the subject of (collaborative) envisioning, in order to apply this knowledge into a digitally supported process that can in turn be utilised by communities to support the creation of a more inclusive vision.

Research Approach

Multiple methods will be used for gaining data within this study, yet different methods provide different sorts of data which are useful to certain situations and in addressing the different research questions, therefore the study has been designed in a staged process, using the appropriate methods as required, as was demonstrated in fig. 11.

The approach to this research was guided by a Design Research approach, and as such employs a general design process.

- Establishing the requirements and identifying the needs,
- Developing alternative designs that meet those requirements
- Building interactive versions of the designs so they can be communicated, tested and assessed
- Evaluating what is built throughout the process.

Establishing the requirements and identifying the needs

Initially, an analysis of accessible software was undertaken, specifically the area of free (or low cost) applications (apps) that were downloadable onto PCs and mobile devices such as tablets and smart phones. The apps were selected by their relevance to, and potential for, carrying out tasks surrounding creativity, design, imagination, and communication. This activity was carried out prior to the design of the **Preliminary Study** entitled 'Young Digital Citizenship', a collaborative project with Action in Rural Sussex. This preliminary study enabled me to design elements of a workshop which assisted in identifying apps, processes, tools, insights that shaped the subsequent workshops and the design of a digital envisioning tool (Identified as EF1 in Fig. 20), which is the 'constructed artefact' in relation to the constructive design process which followed.

Developing alternative design that meet those requirements

Envisioning Framework: Version 1 was created in response to the insights gained from the literature and the preliminary study. The Envisioning framework consisted of an envisioning process supported by the tools identified as purposeful, meaningful and engaging by the participants of the Preliminary study.

Building interactive versions of the designs so they can be communicated, tested and assessed

The four subsequent workshops utilised the different versions of the Envisioning Framework. These workshops consisted of local young people whose outputs were incorporated into real life envisioning processes currently happening. Through the participant interactions with the different iterations of the framework, empirical data was collected using a variety of ethnographic and phenomenology approaches and methods (as mentioned above). These findings were analysed and in turn informed the incremental changes made to the subsequent Envisioning Framework Versions.

There were 4 workshops in total, each took place in different locations, dependent on the participants, the activities, and the location being focused upon. When working with young people additional care had to be taken in regards to safety and comfort.

Evaluating what is built throughout the process

The outputs produced and insights gained by the process were evaluated in several ways:

- Firstly, the participants themselves presented the ideas produced, reflecting upon and evaluating the suitability of the 'visions' as well as providing feedback regarding the suitability of the digitally supported framework.
- Additionally, the final Envisioning Framework and the digital methods it utilised were presented to members of a Neighbourhood Planning steering group, in order to gain feedback regarding the suitability of the outputs and methods from the view of the people who may be using them in real life applications.
- Finally, the Envisioning Framework and outputs produced were also presented to community planning engagement officers and planners in order to gain professional feedback.

Research Quality and Ethics

The nature of qualitative research is such that it is based on subjective, interpretive and contextual data. The validity in qualitative research takes the stance that the emphasis is placed on the balanced understanding and interpretation of respondents' meanings rather than on the discovery of external facts (Merrick 1998). The research carried out is to gain insight from the interactions of participants with the constructed digital tool, how they respond, use, and reflect on the tool in the context of a collaborative envisioning process will be used to form insights surrounding the potentials of the design of the tool and methodology within the process, contributing to the larger discussion.

To ensure that all research methods and activities carried out were done so ethically, the following measures were taken during each activity involving participants. Informed consent was obtained prior to data collection phase, either by the participant or by the parent for those under the age of 16, making sure each participant had sufficient information about the research procedures so they were able to decide whether to participate or not. They also had the right to withdraw at any time and were made aware of this. All information acquired about the participants was kept confidential and all photographs and videos taken were not used unless

prior consent had been given by the participant or their legal guardian (in the case of those under 16). Additionally, data collection did not commence until full ethical clearance was received from the University of Brighton ethics committee (Kvale, 1996).

Specific to this research are ethical considerations surrounding the use of digital tools; whenever an interactive tool is designed, it offers affordances and limitations in how it can be used, who it can be used by and what it can produce. I have my own agenda for this research, Action in Rural Sussex too have an agenda, and in turn a certain degree of power over the affordances of the tool and subsequently the outputs participants are able to produce. It is crucial to recognise that interactions within invited spaces are shaped by deeply rooted experiences of privilege and power, exclusion and powerlessness (Cornwall, 2008). When carrying out these workshops it is vital to reflect on the procedures being carried out and be aware that those who enter into these spaces may consciously or unconsciously mimic the kinds of behaviour they have witnessed in these and other spaces, or behave or produce outputs in a manner they believe to be 'right' or 'correct'. It is vital as a researcher and facilitator to be mindful and reflective of this.

3.2 Methods

Young people were selected as an example of a disenfranchised social group due to several contributing reasons: they are a group currently under-represented in local decision making processes, and considering young people will be the one most affected by the decision from the visions, it seems imperative that their opinions and ideas should be taken into consideration by older people. Little research had been conducted into why younger people don't take part in local politics, yet several barriers have been identified including: the confrontational style of local politics where younger people are attacked principally on the grounds of their age ('Emily White is not alright', 2011), and the perception that older residents believe they have more knowledge and experience of the area and are better informed to make decisions. There is also the view that young people will soon move away and therefore will not be interested in the neighbourhood's future, when in reality, they will be the ones living with the consequences. This is not to suggest that 'young people' and 'older people' are each heteronymous groups in any way, diversity will exist due to numerous factors including economic, social, cultural, etc., yet there appears to be a benefit of improving communication between these two groups when considering Neighbourhood Planning and community planning processes. The focus on young people has therefore influenced the selection of methods used.

The qualitative methods presented here have been chosen for their ability to generate detailed information about how the use of a digital tool affects the engagement, experience, and capacity for people to collaborate within a community envisioning process. The study aims to understand the complexity of envisioning and factors which determine ability and willingness of people to participate in it, and whether there is any added value to using digital tools.

As the research questions are focusing on creating a **more inclusive and meaningful** 'shared' vision (RQ1) and seeks to understand how designed products and services mediate communication between people (RQ3), it's the participant's experiences that are in focus, therefore the methods associated with Phenomenology have been adopted. Phenomenology can be considered a philosophical perspective that seeks to describe, understand and analyse a particular human experience or experiential moment through using personal accounts of the participants as opposed to observations, to understand peoples subjective experience and interpretations of the world. To generate data using this perspective can include structured and semi-structured interviews, which are used to systematically explore participants' experiences and identify conceptual meanings of the phenomenon of interest. The strength of phenomenology is the ability it has to qualitatively describe the different ways people make sense of, experience and understand phenomena in the world around them and how these compare across the group, which is useful when exploring the generated or adopted tools with older and younger participants. In the context of this study the phenomena to be explored is the experiential moment of collaborative envisioning, and how the different digital tools and digitally supported process may affect capacity, inclusion and meaningfulness of this, from the participant's perspective. There are however, limitations in that the findings are solely determined on language skills. The participants need to be able to describe what they are thinking and experiencing accurately and consistently, and the researcher requires the skills to accurately and reliably interpret different uses of language and distinguish meaning from spoken word and other verbal utterances (especially pertinent when working with young people with a more limited vocabulary). The transcription and coding is also time consuming and the value can be limited if the correct questions are not posed to the participants.

In order to address the second research question, surrounding the value of a constructed envisioning process in stimulating imagination and empathy and creativity (RQ2), the social science methodology of ethnography is adopted, which is based upon observation. Within this study elements of ethnography are used to observe participants engaging with existing design

and communication tools, and the constructed envisioning process, in order to identify opportunities for where design interventions could be introduced to improve the process of collaborative creativity. Direct observation or video recording of activities could enable detailed information to be gathered for analysis. There are however, a number of limitations presented by this approach: the mere act of being observed may alter the behaviour of those being observed, participants may act how they believe they are expected to and not in a natural manner. Ethnographic approaches generally observe participants in their natural environment, however, it is considered that the constructed envisioning process would be utilised within a workshop setting (as opposed to their own homes), therefore considered valid in this study. The strengths of this research method are that: i) the researcher is able to collect data on a wide range of behaviours including, body language, spoken word, and social nuances. ii) The research process is open-ended, following the behaviour of the group to identify research outcomes. iii) The researcher is able to gather data from a greater range of interactions with participants such as sharing a group activity/workshop experience, informal conversation and subtle interpersonal interactions. Limitations and challenges of this method include: specific considerations of research ethics, such as the relationship between research participants and researcher, and what effect this may have on data gathered? The data gathered will be highly interpretive and may require feedback and clarification of observations with research participants to ensure observations have been correctly interpreted. This method offers efficiency to data collection, by studying multiple participants at the same time.

Further to the data generated during the workshops through the interaction of participants with the digitally supported envisioning process, the outputs produced as a result of the workshops i.e. the visions themselves, will also be analysed in order to understand the affect the interaction had with the constructed envisioning process. These visuals can be used within qualitative research studies. Weber (2008) has identified visuals produced by participants, or images and objects used to elicit or provoke other data, can be used for feedback and documentation of the research process, as well as being useful as a mode of interpretation and/or representation (Prosser, 2008, 5). Research produced through respondent generated visual methods is a way of empowering participants by enabling them to identify and prioritise information that is most significant to them and their needs. In this instance the nature of participation shifts from the participant as the focus of the study to the participant as co-researcher. User generated visual research data can then be utilised as conversational triggers during discussion sessions to facilitate focused discourse. This approach emphasises the inclusive, collaborative, nature of this research and firmly places this as a study conducting

research with participants rather than on participants. However, these methods depend on the willingness of the participant. Furthermore, it must be taken into account that images, especially drawings and photographs, are constructed representations of personal experiences or activities and not “unmediated renderings” (Prosser, 2008, p19) of reality. These images can contain elements of significance and triviality, therefore any form of ‘meaning’ facilitated, represented or embodied in visual research imagery is a negotiation between the creator, the researcher and the participant group. Responding to these images through discussion and analysis requires particular care, attention and sensitivity to personal issues and ethical responsibilities, which will be discussed in later sections.

This visual and ethnographic approach corresponds to Generative Design research methods, such as the ‘say – do – make’, developed by Sanders and Williams (2001). The argument is that everyday people are creative when given the appropriate “tools”. ‘Say’ is limited to what people can articulate verbally, while ‘make’ methods are believed by Sanders and Williams to go a step further in enabling creative expression by giving people ambiguous visual stimuli to work with, to ‘do’ corresponds to the interactions the designed intervention has stimulated. The ambiguous stimuli they use allows participants to interpret it in different ways, therefore activating different memories and feelings in people. Tools used to support the generation of creativity include: Collages, which allow people to articulate experiences through pictures and words - process of which activates feelings, memories and dreams and in terms of this research relates to assisting participants on the ‘Path of Expression’. Cognitive Mapping is a method which allows people to map out processes and events, or their understanding of categories and systems via the use of poster boards and symbolic shapes (which can be used literally or metaphorically) to understand a participants thinking process or approach. Modelling is a process that is said to work better once other tasks that facilitate immersion and dreaming have been carried out, as it allows people to embody their ideas via ‘hands on’ ways to communicate them physically to others in the collaborative design process, which aligns itself with the ‘Path of Communication’ in creating a vision. By using custom made or prescribed shapes, tools or materials (depending on the activity), participants are able to externalise their ideas (Sanders and Williams, 2001).

Analysis of Data

Qualitative data requires a process of coding to identify concepts, themes or create narrative of the findings. It generally consists of words and sometimes (as in this case) visual, audio, graphic, verbal or textual data. Being described as “the most complex or mysterious of all the phases of a qualitative project” (Thorne, 2000, p68) and the most difficult and most crucial

aspect (Basit, 2003, p143), there are no clear rules about how to carry out the analysis and the approach taken is shaped by what the researcher is seeking to discover from it. Lichtman (2012) believes that a systematic approach is most successful, as it brings order and understanding (p246). The process she recommends is a six step process as follows: 1. Initial coding, 2. revisiting initial coding, 3. developing an initial list of categories or central ideas, 4. modifying your initial list based on additional rereading, 5. Revisiting categories and subcategories and 6. Moving from categories to concepts (Lichtman, 2012, p.265). As this process uses a constructive design research approach, the artefact will change throughout the process, altering incrementally following participant interactions with it. Therefore, the findings, data and insights generated at each stage (each workshop) will be analysed before moving onto the next stage, with findings of each stage of the interactions (workshops) used to influence the next iteration of the artefact to be used in following workshop. The following section details how these methods will be utilised during the workshops.

Study Procedure

This section will cover how the preliminary study and each of the subsequent workshops were undertaken: what aim/questions they were addressing, what methods were used, who was present and what their role was, how participants were recruited, what data was collected and how it was intended to be analysed in order to make the incremental changes to the collaborative envisioning framework (the artefact).

Preliminary Study: 'Young Digital Citizenship' Workshop (YDCW)

20th-22nd and 27th-29th August 2013

Young Digital Citizenship' was a Nominet funded, collaborative project between Action in Rural Sussex and Community 21, assisted by members of the University of Brighton. It provided the opportunity to gain some base line information surrounding the area of young people's engagement and participation in local decision making processes.

Aim: The overarching project aims set by AirS and Community 21 was to understand how young people utilised digital technologies in order to have a greater say in the local decision making processes that affected their communities, and how these digital activities differed from more traditional methods in supporting more considered ideas and enabled young people to communicate them to decisions makers.

In terms of this research, the aim was to begin to uncover what tools young people currently

engaged with, what tools could provide support for a collaborative envisioning process, focusing of the elements identified in the literature as having an effect of the imagination, creativity, deliberation and engagement – a demonstrated in fig. 12 (below). The literature suggested that to facilitate creativity, a digital intervention would need to either support or stimulate explorative action, or somehow increase an individual or groups' exposure to new knowledge bundles, this preliminary study sought to identify existing tools which may do this. Additionally, the notion of stimulating empathic projection was also identified as being of use in assisting people to reflect on their own frames and perspectives, for the purpose of recognising their own cognitive biases to push their creativity. The previous Heathfield Future Village project carried out by Community 21 (Gant and Ganderton, 2011) identified that the use of the Ageing Booth app *potentially* had some value in stimulating young people to consider situations from an older person's perspective, which this preliminary study sought to further explore.

Essentially, this preliminary study acted as the 'bridge' between the identified technologies, and envisioning theories in the literature, plus the digital tools identified in the Future Village Community21 project, with an actual envisioning context (in which the young people were discussing the redevelopment of the Phoenix estate area of Lewes, in relation to Lewes ongoing neighbourhood plan process).

This preliminary study also acted as a learning exercise in terms of designing, carrying out, facilitating, and observing user interaction within workshops. Working as part of a team of experienced individuals taught me good practice and insights into working with young people.

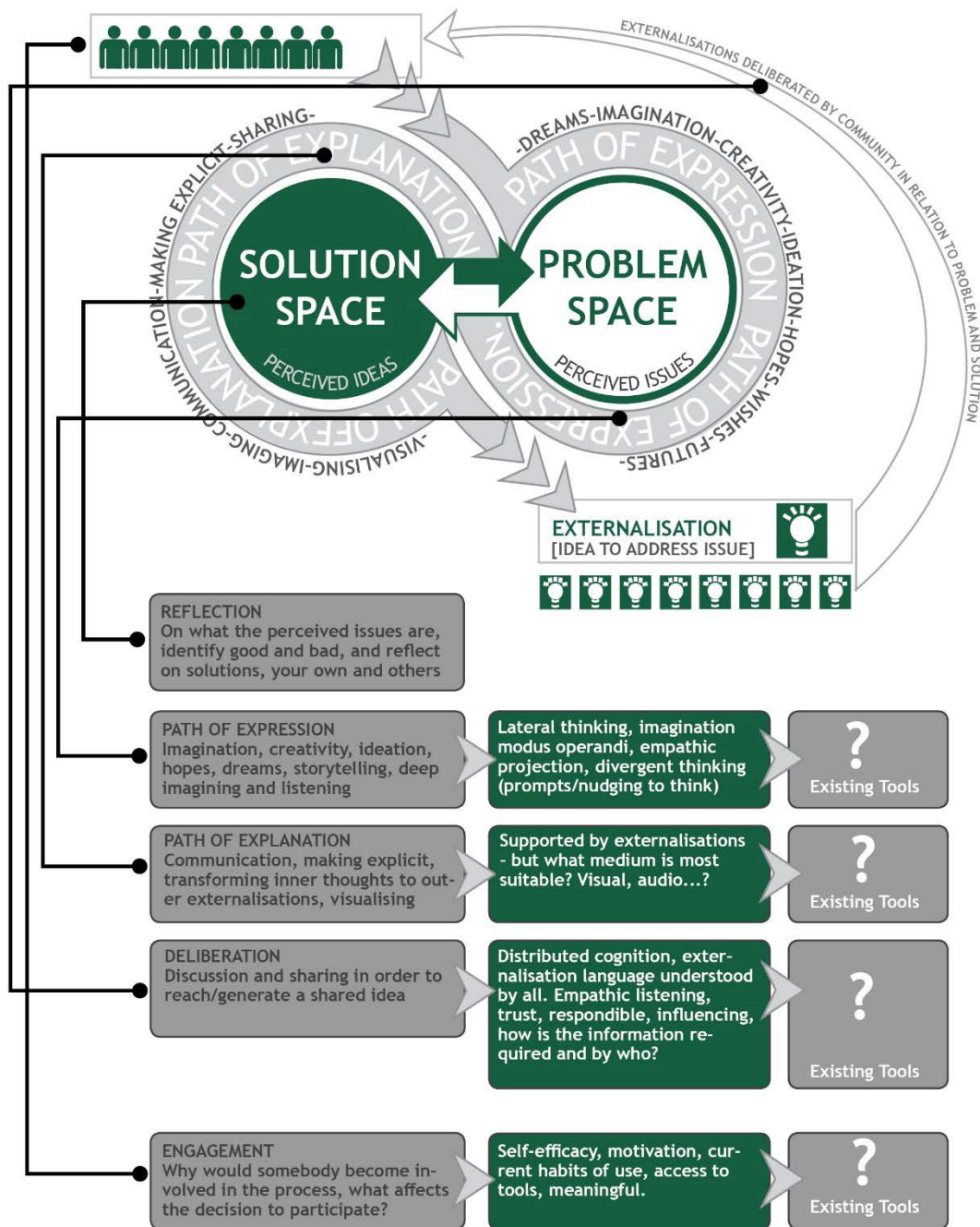


Fig. 12 Diagram of preliminary study aims, Duggan, K. (2015)

Who:

- Kelly Duggan, University of Brighton PhD candidate – Workshop Design, researcher workshop facilitator, observer, participant.
- Nick Gant, University of Brighton and Community21 – Workshop designer, workshop facilitator.
- Liz Allsobrook, AirS Youth Engagement Officer – Workshop designer, facilitator, observer, participant.
- Cathy Grundy, University of Brighton Lecturer and PhD candidate – Researcher, workshop design, workshop facilitator.
- Teresa Gittins, AirS, Deputy Chief Executive and Head of Services – Workshop facilitator, observer, participant (planner)
- Simon Kiley, AirS Policy and Communications Officer –researcher, report writer.
- Joe Palmer, University of Brighton Student Helper – facilitator and participant.
- Joshua Barnes, University of Brighton Student Helper – facilitator, creative and participant.
- Hollie Alexander, University of Brighton Student Helper – facilitator and participant.
- Initial Priory School classroom sessions: NUMBER year 7 pupils (aged between 11 and 12)
- YDCW attendees consisted of local young people aged between 8 – 17 years of age, the numbers of which changed each day due to availability, but remained between 8 and 10 daily.

Recruitment: Participants were chosen by way of invitation, some from hearing about it through Priory school sessions, some having had previous engagement with AirS or the University of Brighton and all of whom lived in Lewes or the surrounding villages. The younger student helpers were also considered as participants, due to their age being under 24.

Where: The initial lessons with the Priory pupils took place in the classroom they regularly used for that lesson. The workshop itself took place at the AirS offices, in which a ground floor function room was taken over for two weeks. The location was deemed suitable, due to its central location in the town of Lewes which assisted accessibility and enabled site visits to be carried out easily. The room itself contained facilities such as laptops, a projector and screen, moveable tables and seating for the different workshop set ups.

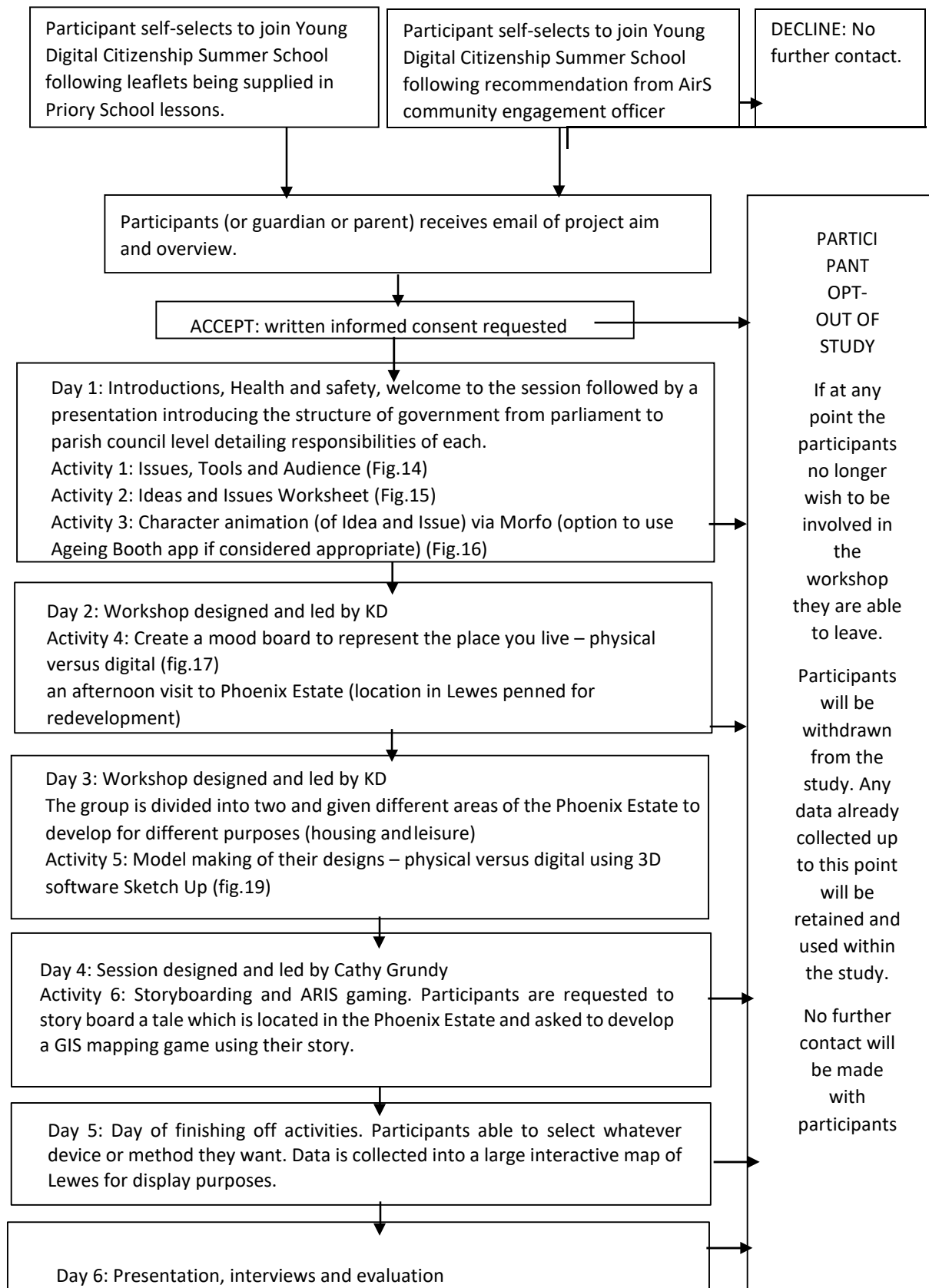


Fig. 13 Flowchart of methods undertaken in Young Digital Citizenship Workshop

Procedure and methods used: The study consisted of a 6-day workshop carried out over a period of two weeks. This study adopted a user centered and co-design approach, in order to utilising the expertise of multiple participants (including young people, designers, community engagement officer, planner and young people support worker). The sessions were co-designed, with certain members taking the lead on sessions. An overview of the sessions is outlined in fig. 13, above.

This collaborative preliminary study is not considered part of the constructive design research, merely an opportunity to bridge theory with real application, and is detailed in full in a separate chapter (Chapter 4). Therefore, only a very brief overview of methods and activities relevant to the subsequent workshops have been included below.

Activity 1: Issues, Tools and Audience Worksheet



Fig. 14 The Issues, tools and audience tool in use (N. Gant)

This activity was repeated from the Priory School sessions. It was a group activity in which participants stated an issue they had with their neighbourhood, then suggested which communication means they considered most useful to address the audience they considered most appropriate in assisting them.

The activity was designed to give base line insight into the communication tools preferred, and identified as appropriate, by young people – suggesting ones which they are more comfortable in engaging with.

Activity 2: Ideas and Issue Worksheet

This worksheet was used to gain insight into what young people considered missing in their neighbourhood, or an idea to resolve an identified issue. The use of photo's acted as prompts and were added to encourage the participants to consider factors which they may not have thought of initially.

WHAT'S YOUR BIG IDEA?

Your name: _____

WHAT'S YOUR BIG ISSUE?

What do you think are the big issues and what big ideas do you have for the future of your community? Write and/or draw them above - you can use the council's themes to help - but only if you want.

HEALTH

TRANSPORT

WASTE & RECYCLING

PLANNING & BUILDING

ENVIRONMENT & WILDLIFE

LEISURE & RECREATION

BUSINESS & ECONOMY

Community²¹
digital citizenship

Fig. 15 Example of Issue and Ideas worksheet (co designed by project team and N. Gant)

Activity 3: Character Animation using Morfo and Ageing Booth Apps

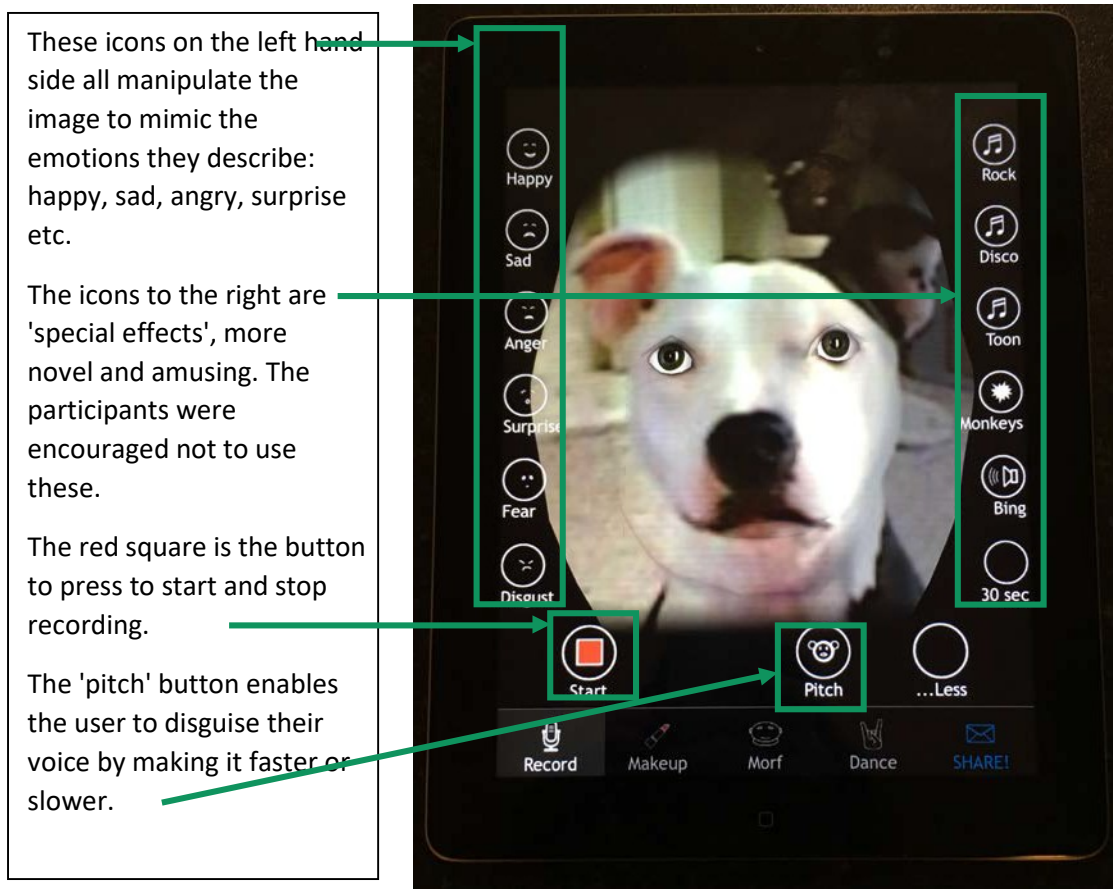


Fig. 16 Morfo Screen example (K. Duggan)

Morfo App (fig.16) is an image manipulation app which enables the user to characterise any photograph or image of a person, object or structure. By added facial elements such as eyes, nose a mouth, the image can be given emotions using the touch commands on the left hand side of the screen. The user then records a message by pressing the red 'start' button on the bottom left of the screen, and adds in the appropriate emotions whilst recording the message.

The participants were asked to select appropriate characters and externalise their issues or ideas via the creation of a short animation. The example shown in fig. 16 was a dog selected by one of the participants when considering how an animal would use the space.

Activity 4: Create a Mood board

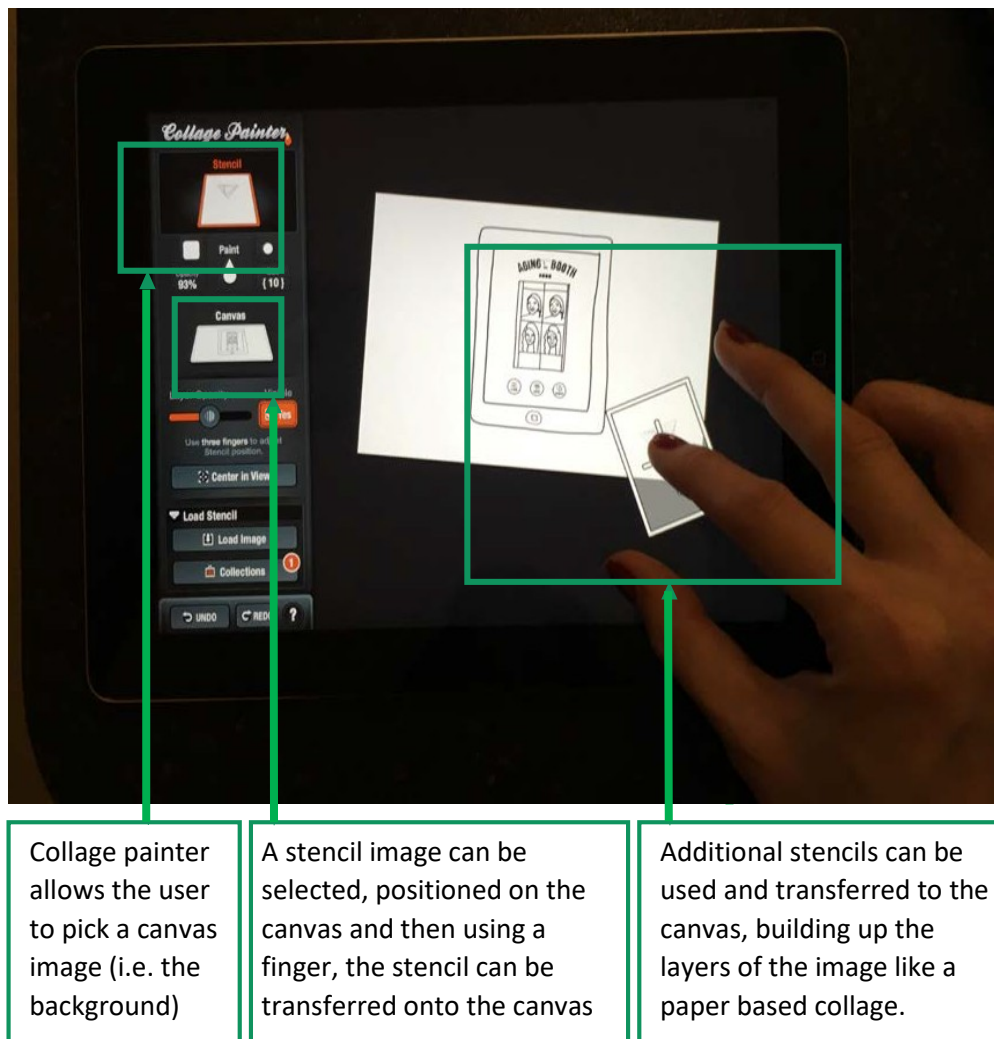


Fig. 17 Example of Collage Painter app and how it works (K. Duggan)

The Mood board activity was designed as a comparative look at a digital version of a widely used non-digital activity. The participants were firstly asked to create a paper based mood board, representing their neighbourhood, identifying the elements they liked and those which they didn't like, and communicate this visually using cuttings from magazines and lettering stencils provided. They were then asked to carry out the same activity using their choice of a selection of tablet supported apps, namely Collage Painter (fig.17), Simply M-Press, Vidilicious, or their choice of apps they knew of and felt were suitable for this exercise.

The purpose of this activity was understand how young people reflect on and perceive the place they live, what elements they notice most, are there recurrent themes of interest, and are there issues that they don't seem to consider. Was there any value in creating a visual as

opposed to using the idea and issue worksheets? It also sought to gain insights on whether they preferred using digital or non-digital processes: which did they find the easiest, which did they feel best expressed what they were trying to communicate, which approach were they more confident in using and sharing etc.

Activity 5: Model Making, Physical versus Digital



Fig. 18 Scale model of Phoenix Estate (N. Gant)



Fig. 19 Example of Sketch up interface (K. Duggan)

The participants were divided into two groups and each assigned an area of the Phoenix Estate to develop and a building category to focus on. Following a facilitated discussion and brain storming within their groups, the participants were asked to create their designs. Initially they were provided with cardboard, glue and modelling clay, then were asked to use 3D modelling software Sketchup to create their designs.

The purpose of this activity was similar to Activity 4 in that is sought to compare the use of digital to non-digital tools, however, this time its focus wasn't on reflection and expression of the place you lived, but the externalisation of an idea. It was designed to gain insights into which media the participants perceived as being the most suitable to externalise their design idea and which they engaged with more.

Data outputs: The methods and activities carried out produced a large quantity of observation notes, feedback surveys, video interviews along with the generated designed data which included photographs, animated videos, photo manipulations, physical models, virtual models to interpret.

Workshop 1: Nutley Youth Group

The Nutley Neighbourhood Planning steering group had approached AirS requesting advice for engaging young people in their Neighbourhood Planning process. AirS informed them of the Young Digital Citizens Workshop (YDCW) which had recently taken place and advised that a PhD student was looking into methods to engage young people within community planning processes, and may be able to help. From there a meeting was carried out attended by Kelly Duggan, Faustina Bayo and members of the Nutley Steering Group in which notable methods employed during the YDCW were discussed and as a result a workshop arranged.

Who:

- Kelly Duggan, University of Brighton - Workshop design and facilitator
- Faustina Bayo, AirS Community Development Officer – Workshop Facilitator
- 10 members of the Pulse Youth Group
- 2 parents (who regularly attend to assist with the workshop activities)
- Pulse Youth group leader

Recruitment of participants: The participants consisted of existing members of the Pulse Youth Group, who were informed of our attendance in the session previous to the workshop. The young people were therefore able to decide whether they wished to be in attendance for it, or not.

Where: The workshop was carried out in the Nutley Village Hall, where the Pulse Youth Group meets every week. It was decided a suitable location due to the fact it was close to where the young people lived and it was a space that they knew and were comfortable in.

Aim: The aim of the workshop was to employ a selection of digital tools that had been identified as potential affordances in the preliminary studies, as part of an envisioning process EFV1 (fig.20). This EFV1 was the initial ‘constructed element’ of the constructive design research. Two apps, namely Ageing Booth and Morfo were identified as containing positive affordances, in terms of ideation and externalisation, but required more rigorous investigation in order to establish their value in supporting ideation and externalisation, whether people were willing to listen to each other’s point of view via this medium, were people able to respond and how, who would view these visions and how would they use them? And how do they fit into either the creation or presentation of a shared vision? Other activities noted for their value from the preliminary study included Treasure and Trash Maps (as a means of reflection) and Ideas and Issues sheet, as a quick means of obtaining an idea.

Collaborative Envisioning Framework Version 1

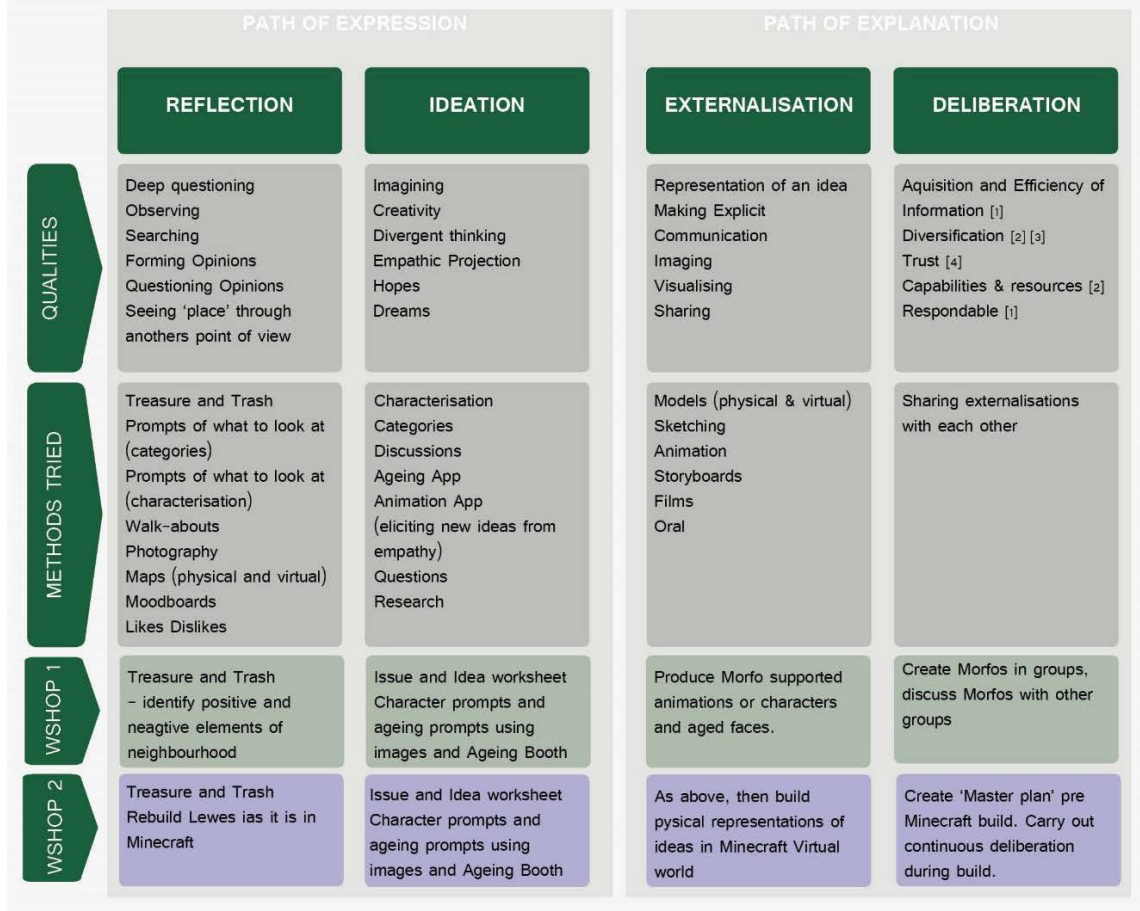


Fig. 20 Envisioning Framework Version 1, Duggan, K. (2015)

Procedure and Methods used: The session lasted for 1 hour 30 minutes

- A 10-minute animated presentation was given surrounding the context and purpose of neighbourhood planning.
- The group was then divided into three and asked to carry out the following activities.
- Activity 1: Treasure and Trash, used to support reflection and identification of good and bad elements of the place you live (fig.21)
- Activity 2: Issues and Ideas worksheet (fig.15), identify main issue and think of a solution for it (no prompt)
- Activity 3: Character prompt issues and ideas, used to support ideation and empathic imagination. The participants were asked within their groups select a character (set of pre-drawn characters were provided to the group fig.23) and

animate what their issue and idea might be in Morfo App.

- Activity 4: Ageing prompt issues and ideas, used to support ideation, empathic imagination. The groups were asked to age their own faces using the Ageing Booth app, and then animate them in Morfo, stating what their issue and idea would be as an older resident.
- Activity 5: Feedback Sheet



Fig. 21 Example of Treasure worksheet, Duggan, K. (2014)

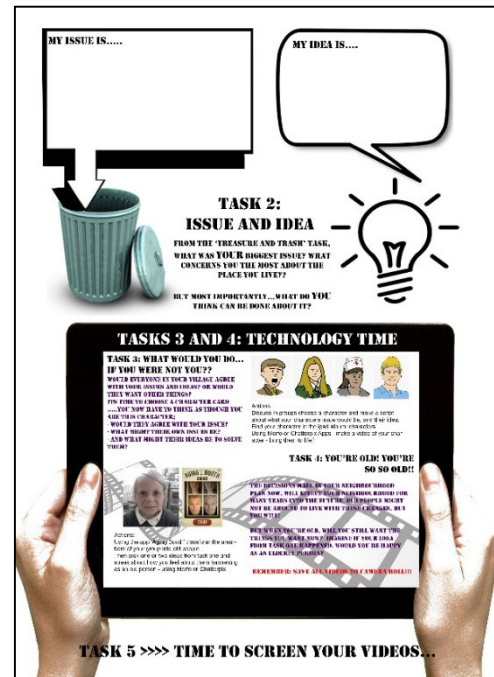


Fig. 22 Example Issue - Idea worksheet, Duggan, K. (2014)



Fig. 23 Example of two of the character prompts used, Duggan, K. (2014)

Data generated: Observation notes surrounding the levels of engagement, interest, enjoyment, completion of the activities were collected. Issues and Ideas sheets were collected and compared with the issues and ideas produced when using the character prompts and the Ageing Booth App. Feedback sheets were also collected from each participant to gain insight into how they reflect on the activities.

Work shop 2: Easter Minecraft Workshop

The Easter Minecraft workshop was an extension from the initial YDCW, in which the introduction of a gamification method was made, whereby participants were asked to ‘build’ their visions in the virtual world of Minecraft.

Aim: The aim of the workshop was to employ a series of digital tools set out within the envisioning framework (Fig. 20: Envisioning Framework Version 1), but this time introducing ‘gamification’ methods supported by Minecraft. This was to gain insights into the value and affordances within Minecraft to understand what it offers in terms of supporting reflection, ideation, externalisation and deliberation.

Who:

- Kelly Duggan, University of Brighton PhD candidate – Workshop Design, researcher workshop facilitator, observer.
- Nick Gant, University of Brighton and Community21 – workshop designer and facilitator.
- Liz Allsobrook, AirS Youth Engagement Officer, facilitator and observer

- Joe Palmer, University of Brighton Student Helper, workshop designer and facilitator.
- Joshua Barnes, University of Brighton Student Helper, Minecraft support.
- Megan Leckie, University of Brighton, Student Helper, Minecraft support.
- 13 participants from Lewes and surrounding areas

Recruitment of participants: The young people present at the initial YDCW were invited back in order to continue the work they had developed, but this time using Minecraft. Additional participants were recruited at this point via word of mouth through the previous participants, which saw numerous school friends and parent's friends' children also requesting involvement. This is potentially due to firstly, the use of Minecraft, and secondly the fact the workshop was carried out during the Easter Holidays, therefore it essentially provided entertainment as well as child care during the day.

Where: University of Brighton Digi-Hub and adjacent studio. The Digi-Hub is located on the 1st floor of the main Grand Parade building and available due to it being the holidays. The room was equipped with Minecraft compatible PC's which the participants shared one between two.

Procedure and Methods: The workshop was carried out over 2 days, from 10am till 4pm each day. Participants were split into two groups. Group one followed the 'Prototype envisioning app' (Fig.24) which set the context of the workshop and instructed them to complete the Issues and Ideas activity, first from their own point of view, then via a character prompt. Group 2 completed ideas and issues from their own perspective. The participants then remained in two groups and discussed 'Master plans' for the 'virtual Phoenix Estate' development in Minecraft, and finally carried out the build.

Data Generated: By having only one group carry out the Character Prompt Issues and Ideas activity, it is thought the resulting Minecraft Designs will suggest the value of empathic prompting, as the 2 groups designs can be compared.

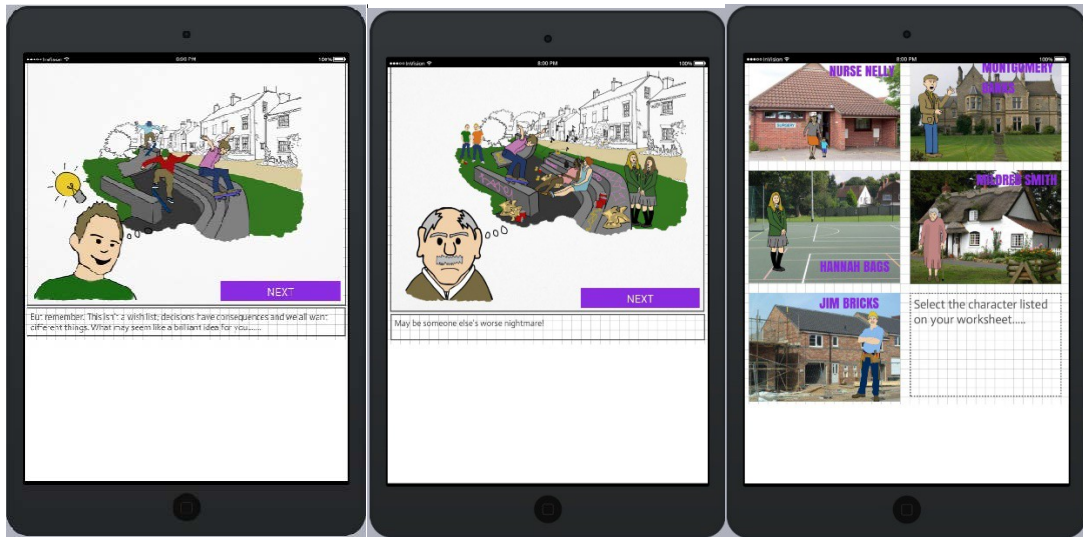


Fig. 24 Samples of pages of prototype envisioning app (Full version found in appendix E)



Fig. 25a Screen shot of Lewes Minecraft



Fig. 25b. 3D printed Model of Lewes Minecraft design (Gant, N.)

Workshop 3 – ‘Valley Gardens 1’

These workshops were carried out as part of a live development project being run by Brighton and Hove City Council, called ‘A vision for Valley Gardens’. Valley Gardens is a collection of green park areas that are situated along the main road that brings people into Brighton, running from the Old Steine up to St Peters Church Gardens. The latest council proposal entitled ‘Rebuilding Valley Gardens’ will make alterations to the road layouts, pavements, planting, trees, lighting and events. Consultation, feedback and ideas were still being sought at the time of research, with Brighton and Hove City Council searching for engagement with the people of Brighton in order to understand what their vision for the potential future use of the area would be. Making the decision to use this project as an envisioning workshop was deemed appropriate for this thesis, due to its required output of a vision following an envisioning process. A process that invites different stakeholders to consider the land use of a designated area, upon which developments will be made potentially affecting those that live

around it, as well as providing an opportunity to apply the ‘collaborative envisioning framework’ process to a real live scheme.

Aim: The aims of the workshop were to test the amended app supported process of the Collaborative Envisioning Framework Version 2 (Fig. 26 – below), with not just young people, but older residents too. Following the incremental changes made as a result of the data analysed from the previous workshop, an evaluation stage was added, as well a series of questions surrounding each of the stages, which this workshop was designed to address.

Who:

- Kelly Duggan, University of Brighton – Workshop Designer, researcher, facilitator, observer.
- Megan Leckie, Block Builders – Minecraft Facilitator
- Joseph Palmer, Block Builders – Minecraft Facilitator
- 14 young participants
- 2 older participants

Recruitment: Situated in the centre of Brighton, it was important that the participants were local and had an awareness of the area of land being discussed. Therefore, the recruitment of the young participants was carried out via Block Builders contact list* through which emails were sent out to local parents detailing the opportunity to be involved in the ‘A Vision for Valley Gardens’ process and contribute to PhD research. The recruitment of the older participants required door to door flyering of local homes and businesses and promotion through social networks.

*Since the initial workshop where Joe Palmer and Megan Leckie were student helpers, they had started up Block Builders social enterprise through which they carried out Minecraft workshops with young people, and schools around East Sussex. Within this research, they followed workshop designs created by me and facilitated the young people’s Minecraft use (technical and operational assistance).

Where: University of Brighton, Grand Parade Campus – The Design Hub. This location was selected for several reasons: it is located opposite Victoria Gardens (which makes up part of the valley gardens development). The room is located on the 3rd floor and provides multi-purpose, adaptable space which can accommodate different activities and a large group of people.

Aim: The aims of the workshop were to test the amended app supported process of the Collaborative Envisioning Framework Version 2 (Fig. 26 – below), with not just young people, but older residents too. Following the incremental changes made as a result of the data analysed from the previous workshop, an evaluation stage was added, as well a series of questions surrounding each of the stages, which this workshop was designed to address.

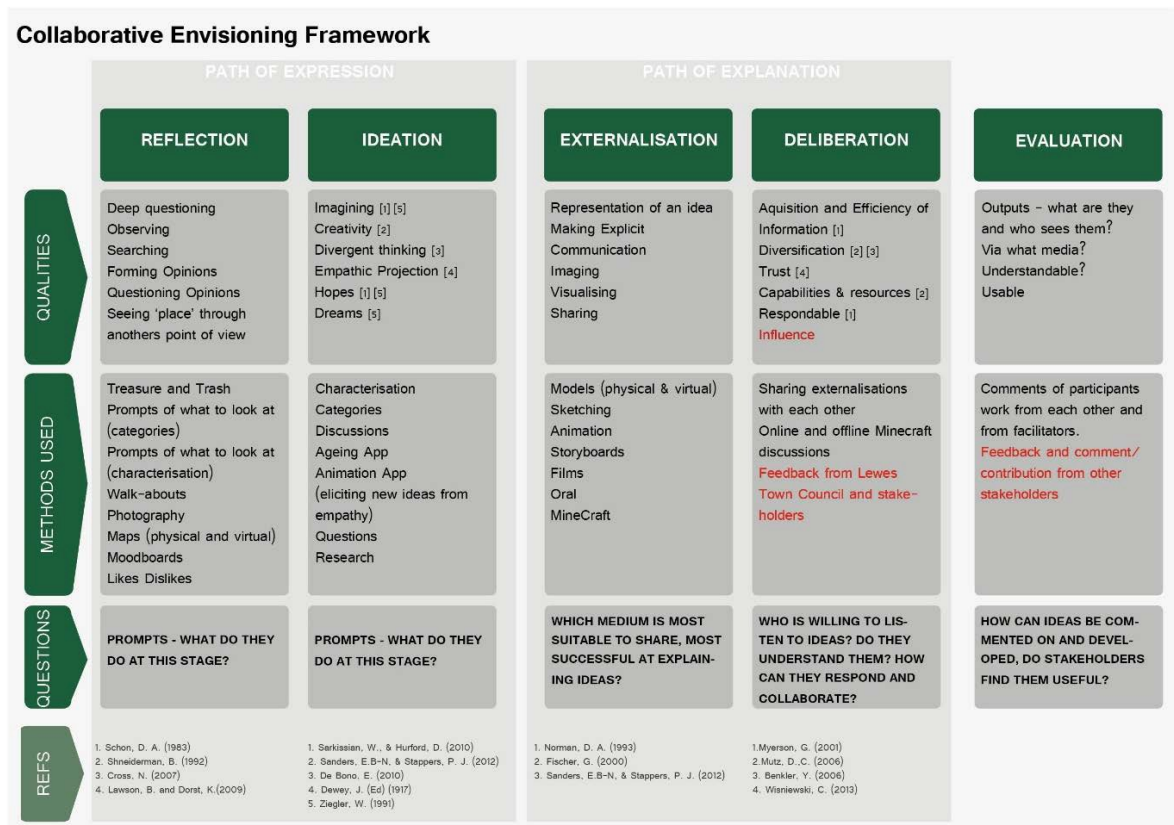


Fig. 26 Collaborative Envisioning Framework Version 2, Duggan, K. (2014)

Procedure and methods: The activities once again followed the Envisioning Framework which incorporated Minecraft, but to address the questions (Fig.26 'questions' column') a greater focus was made on the 'prompts' used for both reflecting on the perceived issues and how they shape the perceived ideas.

Day 1 activities therefore consisted of Treasure and Trash (fig. 27 and 28), and Issue and Ideas (fig. 29), participants then carried out the Ageing Booth app activity and created Morfos of their aged selves. These aged perspectives were then externalised in Minecraft.

Day 2 activities sought to gain insights from character prompts (fig 30), a different visual style of prompt was introduced, the participants then externalised issues and ideas from the perspective of the character using Morfo.



Fig. 27 A3 map of existing Valley Gardens layout, mounted on foam board, given to each group



Fig. 28 Categorized Pins for Maps – attached to cocktail sticks to be inserted into foam board maps. The flags with the bins on indicated the ‘Trash’ or bad aspects of the area, and the flags with treasure chests on indicated the ‘Treasure’ or the good aspects or features of the area. The flags were also characterised into the following groups: environment, building, health, business, waste, transport, leisure and other – these were used a gentle prompts to encourage the young people in thinking beyond the realms of leisure activities.

Valley Gardens: ISSUES and IDEAS

My big ISSUE is

⊘

My big IDEA is

💡

Our joint idea is.....




Fig. 29 Issue and Idea Worksheets, Duggan, K. (2015)



Fig. 30 Character Prompts – for use with Morfo App

Data collected: Treasure and Trash Maps, Issue and Idea worksheets, animations of ‘elderly perspective’ Morfos, animations of ‘character perspective’ Morfos. A series of design externalisations in Minecraft. These designs were presented by the young people, followed by group’s discussion in order to evaluate their suitability to the location. Each participant completed a feedback form regarding the activities carried out that day to gain insights into enjoyment, ability and usefulness of the process and apps utilised, and the value of the prompts.

Reflection

Treasure and Trash map - backed with foam board

BUILDING
THE TREASURE
IS TREASURE
BECAUSE ...

LEISURE
THE TREASURE
IS TREASURE
BECAUSE ...

HEALTH
THE TREASURE
IS TREASURE
BECAUSE ...

TRANSPORT
THE TREASURE
IS TREASURE
BECAUSE ...

ENVIRONMENT
THE TREASURE
IS TREASURE
BECAUSE ...

Categorised flags to use on map

Valley Gardens: ISSUES and IDEAS ...

My big ISSUE is ...

My big IDEA is ...

Ideation



Animation using Morfo App



Big Issue, Big Idea form

Character prompts

Empathic ideation



Ageing Booth App used to change the appearance of participants



The 'aged' image is put into Morfo App - through which issues and ideas are redone from a perceived elderly point of view

externalisation |



Deliberation

Minecraft allowed the participants to discuss in person and on screen



Fig. 31 Visualisation of envisioning process in action, Duggan, K. (2016)

Workshop 4: Valley Gardens 2

A second Valley gardens workshop was carried out in order to address some remaining question concerning the Collaborative Envisioning Process Version 3, via a more rigorous data collection approach.

Aim: As detailed in the Collaborative Envisioning Framework Version 3 (Fig. 32 - below) a greater onus was made on taking a comparative look at the digitally enabled envisioning process, versus a non-digitally enabled process, in assisting collaborative envisioning.

Another focus was on the collaboration between young people and older people, both selected as the literature suggested the young people are not represented and (in many cases) it is an older demographic who is not engaging them, plus they can be considered groups who will have differing perspective about the positives and negatives aspects of their neighbourhood, and different ideas regarding the needs of the community in the future. The scenario set out by this framework by no means suggests that either older or younger people are homogenous groups. However, it does provide a context through which to gain understanding whether the use of digital tools has any value in supporting collaboration between, what can be considered, diverse groups, as is often the case in real life situations.

Who:

- Kelly Duggan, University of Brighton – Workshop design, researcher, observer and facilitator.
- Megan Leckie, Block Builders – Minecraft Facilitator
- Joseph Palmer, Block Builders – Minecraft Facilitator
- 14 young participants
- 5 older participants who were local residents to the Valley Garden area

Recruitment of participants: As per workshop 3, yet with a greater onus on engaging older residents. More intensive and widespread flyering was carried out, posters were left in local community centers, dentists, doctors and a number of charities and companies who worked with older residents of Brighton shared an e-flyer through their email address books.

Where: University of Brighton, Grand Parade Campus – The Design Hub. As per the reasons in previous workshop 3.

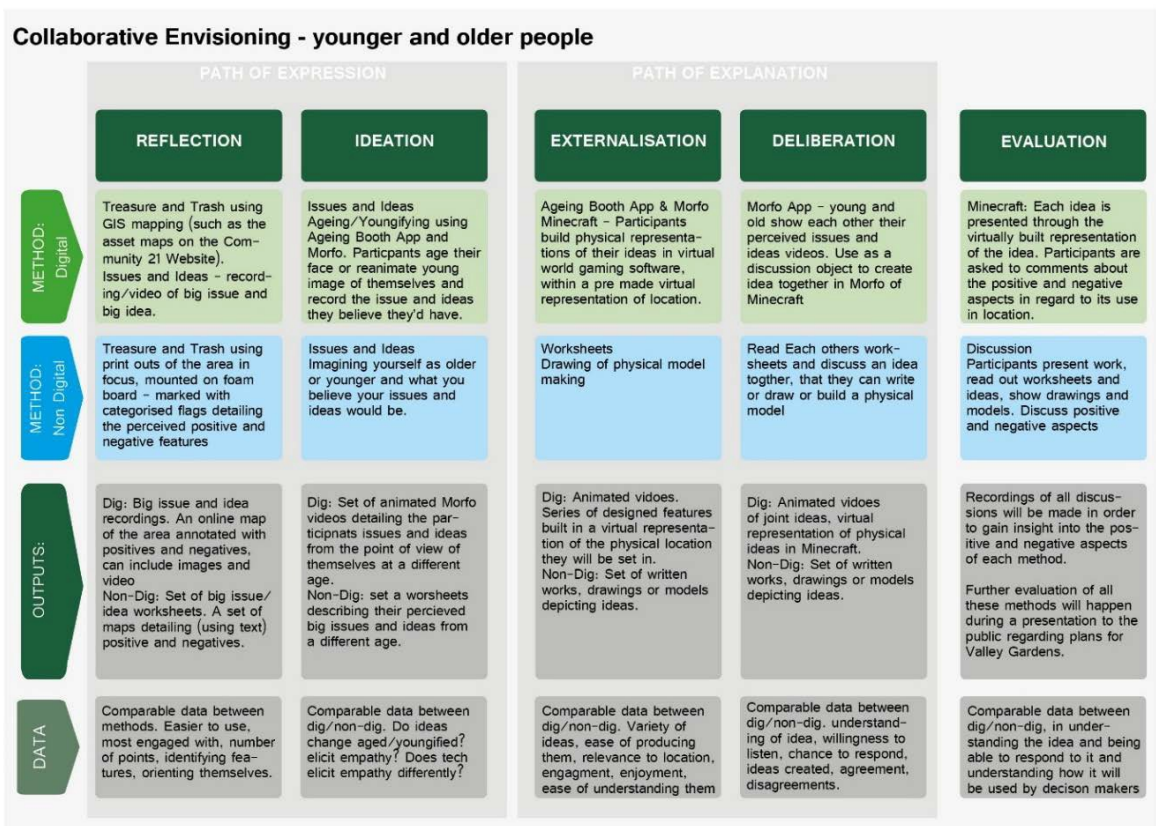


Fig. 32 Collaborative Envisioning Framework, Version 3, Duggan, K. (2015)

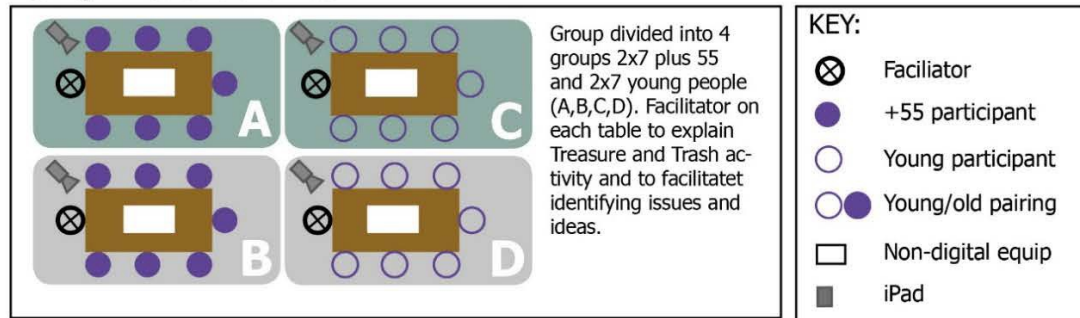
Procedure and methods:

Each stage of the envisioning process (Reflection, Ideation, Externalisation, etc. ...) consisted of a digital and non- digital activity. The participants were split into ‘Digital’ ‘non-digital’ groups in order to generate comparable data from each stage of the process.

Data collected: The data collected will be in two forms for each stage i.e. Treasure and Trash Maps digital, and Treasure and Trash maps non-digital, etc., these can be compared, plus the feedback given by the participants during presentations and feedback forms. The use of audio and visual observations will be captured through cameras and recording devices placed around the studio, as set out in (Fig 33), to capture the conversations of the participants as they were undertaking the envisioning activity, these were transcribed and analysed following the workshop.

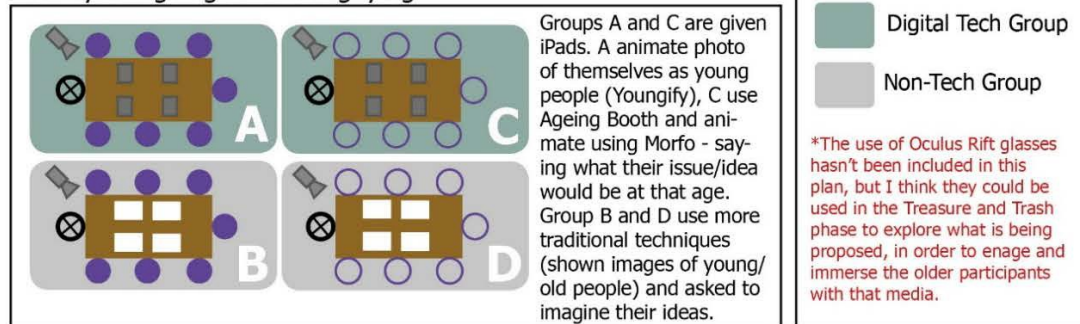
The following two chapters (Chapter4 and Chapter 5) detail the findings of the preliminary workshop and the subsequent workshops.

Activity 1: Treasure and Trash

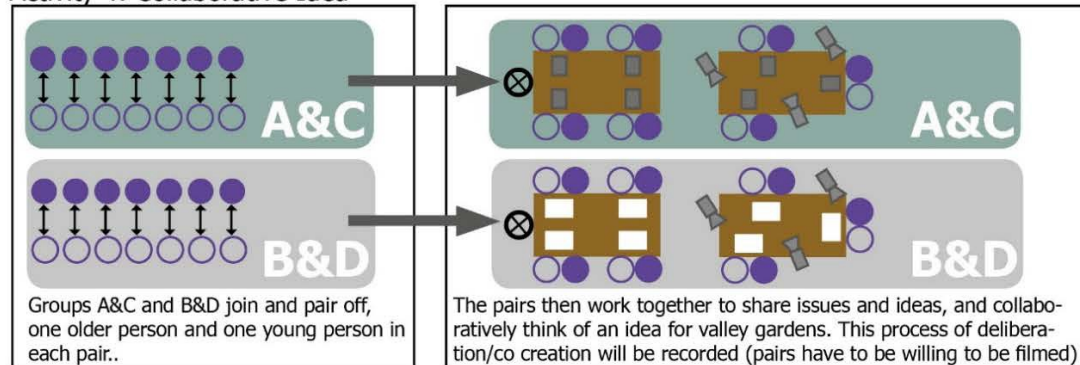


Activity 2: Issues and Ideas - each individual remains in seats and completes worksheets as done previously - describing what their personal issue and ideas are without any prompts (have option to video record these instead).

Activity 3: Ageing and Youngifying



Activity 4: Collaborative Idea



Activity 5: Externalise Ideas on Minecraft

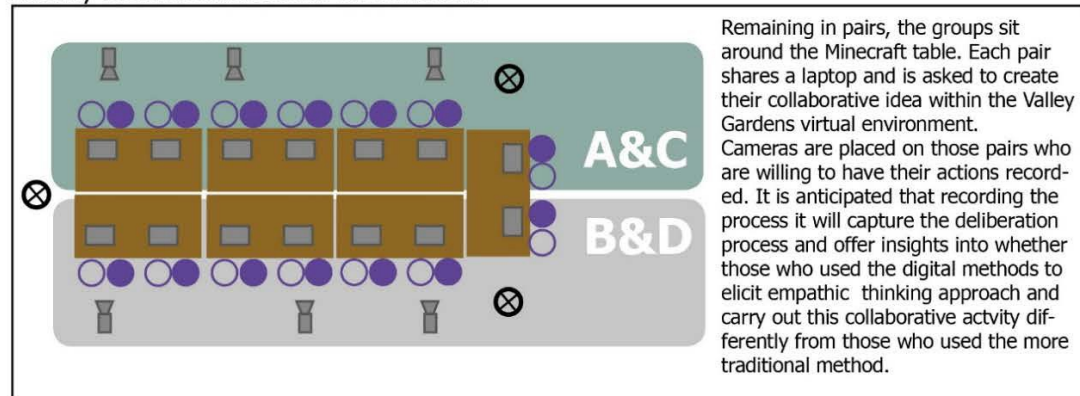


Fig. 33 Workshop plan for capturing audio and visual data generation, Duggan, K. (2015)

Chapter 4: Preliminary Study

4.1 Purpose

This preliminary study acted as a bridge between the theories and insights generated within the literature review surrounding the activities that were identified as being potentially useful in producing a vision, and what was actually deemed as useful by young people in a real envisioning context. Its purpose, therefore, was to generate a baseline understanding of what tools (both digital and non-digital) were available, favoured and deemed as useful by the young people participating, and what these tools afforded in terms of creating a vision. Being a co-design project, it also ensured that the users' voices were being brought into the design conversation from the initiation of the project.

This preliminary study, entitled 'Young Digital Citizenship', was carried out in conjunction with AirS and Community21 with funding from the Nominet Trust. The project sought to understand the role of digital tools in engaging young people in local decision-making processes (a full detailed project overview can be found in Appendix C). Working as part of this project enabled the exploration of the diverse area of 'digital tools', assisting in narrowing down which hardware and software were most widely used by, accessible to, favoured by and deemed useful amongst young people. One of the project aims was to establish what digital tools did the young people find creative, what did they consider useful for communicating, what engaged them, and which, if any, of the tools supported divergent thinking, empathic projection, reflection or reframing as identified in the literature.

Additionally, it provided the opportunity to identify what tools the professionals (such as planners, youth workers, researchers and designers) found useful, applicable and worthwhile to use, for the purposes of youth engagement (i.e. the Ageing Booth app, as originally utilized by Community 21 in their Heathfield Future Village project) (Community 21, 2011). Working with planners, community engagement officers and youth support workers allowed me to observe not only the methods they employed, but also the co-design and implementation of a workshop, which assisted greatly in understanding good practice for designing and carrying out my own subsequent workshops.

The preliminary study enabled me to understand in more detail if what was presented by the theory and literature as engaging and useful was demonstrated as being relevant in a current practical environment. By working with young people it was possible to identify which digital tools were engaging, popular, preferred by them and assisted in communicating their ideas. The workshop thus provided insights of the best tools to employ in future workshops.

4.2 Procedure

The workshop was co-designed and facilitated by all members of the project team, which enabled me to work with the questions relevant to my own research, and design sessions which assisted me in obtaining data to address my research questions. The individuals involved with this project, and their role within it, are detailed in the table below.

Name	Company and Job Title	Role in Workshop
Kelly Duggan	UoB ,Designer, PhD candidate	Facilitator, researcher, workshop design
Teresa Gittins	AirS,	Facilitator
Liz Allsobrook	AirS, Youth Engagement	Facilitator, workshop design
Dr Simon Kitley	AirS,	Evaluator
Nick Gant	UoB, Designer, Lecturer	Facilitator, researcher
Cathy Grundy	UoB, PhD candidate	Facilitator, researcher
Joshua Barnes	UoB, Design student	Student helper
Joseph Palmer	UoB, Design student	Student helper
Holly Alexander	UoB, Design student	Student helper

Table 4. List of preliminary workshop contributors and facilitators

Firstly, an ‘App review’ was undertaken to assess potential available ‘apps’ that supported or elicited imagination, creativity, design, ideation, drawing, idea sharing and communication (i.e. those supporting the Path of Expression and Path of Explanation). The ‘apps’ were those that could be downloaded to smart phones and tablet devices (and in two cases, PCs). A detailed summary of these apps can be found in Appendix C. Additionally, a study into apps and software that have been specifically developed to support neighbourhood planning was carried out to ascertain what is currently available in the field, what was being addressed by these tools and whether these apps could be utilised in the project in any way.

Key: Mobile device applications



Ageing Booth App

This app enables the user to take a photograph of themselves (or another person) and then automatically manipulates the image by ageing the face. It does so by adding grey hair, wrinkles, jowls etc. It provides a date, often around 2050's-2060's, that states when the user will look like this.

This app was selected due to its potential ability to support young people in thinking empathically about what an older person (or themselves as an old person) would consider good and bad about their town/village and what that person's ideas for the future might be. It's potential usefulness in supporting the envisioning of future scenarios was identified by the Community 21 Heathfield Future Village project (Community 21, 2011)



Morfo App (fig. 14)

This app enables the user to take an image (photo of a person, inanimate object, or drawing) and manipulate it by adding eyes, a nose, and a mouth to it. These facial features are not static but animated, the eyes move around, the mouth opens and closes, certain emotions can be elicited by the touch of a button (i.e. there are set controls to make the image appear 'happy' – where the eyes narrow and the mouth smiles), bringing the image to life. The user is also able to record a message, which their created 'character' movements are in sync with. The user's own voice can also be manipulated for the purpose of anonymity.

This app was selected to support the user in putting themselves into the position of someone else (to understand a different perspective) and noted as a useful way in externalising ideas (via a video).



Picame

This app enables the user to use any image, photograph or drawing, and manipulate the image by adding a 'mouth-line'. This app, like Morfo, has a recording ability for the user to record their message (or issue or idea). When the message is played back the 'mouth-line' opens and closes as though the image is 'talking'. Although this app has less features than Morfo, it does enable the participant to use the image of a person within a context (whereas Morfo is limited to showing just a face).

This app was selected for similar reasons as the Morfo app, but considered to offer something different due to its ability to share an idea set in a context.



Sketch up

Trimble SketchUp is a free 3D modelling software for desktop computers. It has a simple interface that allows the user to create buildings, objects, or neighbourhood layouts. The 3D Warehouse feature enables the user to download prefabricated objects (e.g. furniture, cars, fixtures etc.). The models made can be fully rendered and placed in Google Earth.

This software was selected due to its simple interface and the fact that many schools already utilise it in their curriculum. It provides an alternative to traditional model making, when externalising ideas such as buildings, interiors and landscapes.



Aris

This is an open-source platform that allows the users to create their own games and interactive stories to play, using GPS and QR codes. Creating a hybrid of virtual characters, items and media based in a physical space. The 'control panel' software is carried out on desktop computers, and works with the corresponding app, for users to take outside and play the 'treasure hunt' style game using GIS.



Aurasma

This augmented reality app allows the user to assign objects (a trigger) with their own Auras. When a trigger is recognised through a device (iPad, iPhone etc.), it triggers the Aura, which can be a video/3D animation/3D object, which the users can view through their tablet or mobile device.

4.3 Activities

The project initially began with five number hour long school classroom sessions with a group of 28 year seven pupils (between the ages of eleven and twelve) at Priory School, Lewes, East Sussex. These initial sessions were used as an introduction to the project and also to gain baseline information regarding: what young people knew about the structure of government, what their issues were regarding the town/village they lived in, who they believed they could approach to discuss these issues and via what medium. I attended three out of the five sessions in the role of a facilitator, but did not lead any of the sessions and therefore have not detailed the sessions in this research. However, it was during these initial school sessions that the Ageing Booth App used in combination with Morfo had first been introduced by Nick Gant, having been identified as offering potential in previous 2011 workshops undertaken by Community 21 and the University of Brighton School of Architecture and Design, and AirS entitled 'Future Village' (Gant & Gittins, 2011)

Following the initial school sessions, the 'Digital Citizenship Summer School' was undertaken over 6 days in August 2013 in a function room at the AirS offices in Lewes. Over the course of the 6 days this workshop was attended by participants who lived in Lewes and the surrounding villages, ranging in ages from seven to seventeen. The session leaders and facilitators created session plans that each contained aims and objectives regarding the use of digital technologies, accessible applications and engaging young people in the community design process. Participants were chosen by way of invitation, some having previous engagement with AirS and some being known by the project facilitators. The number of attendees changed each day due to participant availability, but there were between 8 and 10 young participants at each session, plus facilitators who carried out the activities when not leading the session. The workshops sought to gain insight into how young people utilised digital technologies in order

to have a greater say in the decision making processes that affected their communities. The workshops were also used to gain an understanding of how digitally supported activities differed from the more traditional 'pen and paper' methods in stimulating imaginative creativity and enabling the young people to communicate their ideas by externalising them visually, in relation to neighbourhood planning. Over the 6 days a variety of activities were undertaken.

Activity 1: Ideas and Issues and Animated Characterisations

The aim of this initial session was to introduce the participants to the process of neighbourhood planning, and understand the ways in which to ascertain their thoughts and opinions regarding the place where they live. This was done by encouraging them to reflect on what was good and bad, as well as asking them for ideas about what could be changed or improved. A presentation was shown that provided the young people with an introduction to the structure of government, in relation to who is responsible for the decisions made within the political system, and which situated the process of Neighbourhood Planning within this context. A group discussion followed where participants identified what they believed to be positive and negative aspects of the neighbourhood they live in. The group then carried out an activity using the 'Issues, Tools and Audience' worksheet (fig.34) in order for the participants to identify an issue they have with their neighbourhood and suggest the digital tools they would use to communicate this issue with the audience they believe should be addressed. This activity provided information regarding: a) what they considered issues, b) what digital tools they knew of/wanted to use/believed were appropriate to use and c) who they believed was the person/group responsible for making the decisions regarding their issue.

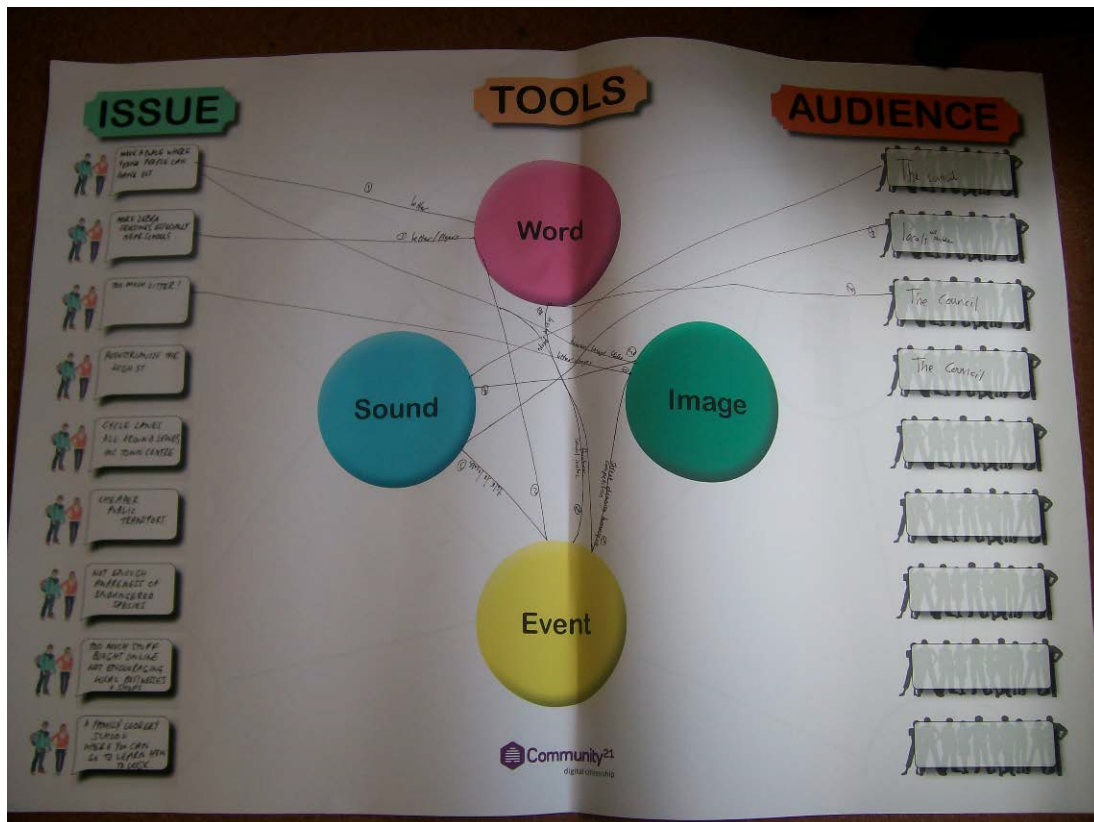


Fig. 34 'Issues, Tools and Audience' Worksheet – A0 (co-designed by project team and graphically designed by Nick Gant and Joshua Barnes)

The issues that the young people described included topics such as there not being enough cycle lanes on roads, public transport being too expensive for young people, there not being enough places for them to 'hang out', there being too much litter and the cost of university education being too expensive. There appeared to be no favoured process that the young people believed to be most successful in communicating their issues and ideas to the chosen audience; in fact, a mix of approaches utilising a variety of digital tools was most often used. Suggestions included: using sound and image together to create a documentary detailing a problem, using social media (Facebook, Twitter) to organise protests (aimed at 'the council') or community events such as 'Bike It Days' or 'Eco Days' (aimed predominantly at the council). More formal methods such as email were also suggested for approaching the council or the police regarding issues.

What this activity brought to light was the knowledge of communication software available to them, many of which they already utilised on a daily basis. It also highlighted their ability to select the appropriate application of tools to support each process, in order to address a certain audience. They did not perceive Snap Chat (an instant visual messaging app) as an

appropriate way to address council figures or the police, yet understood that Twitter could be used to reach these groups.

In regard to the second question of this research, the activity offered little in the way of addressing how digital tools support the capacities required for envisioning, except that it supports the literature findings that digital tools (within young people at least), are becoming the normal ubiquitous form of communication, which tentatively suggests that utilising digital technologies is useful to engage the younger generations.

The following activity saw the group split into pairs which were asked to decide on an issue and think of a potential idea to address this, using the 'Ideas and Issues' worksheet [Fig35].



Fig. 35 Ideas and Issues Worksheet (co-designed by project team and graphically designed by Nick Gant)

This worksheet contained visual prompts as to the different topics the participants might consider, which were added in to stimulate the participants to think about issues that are within the scope of a neighbourhood plan. It was also an attempt to avoid what became known as ‘the skate park syndrome’, which was noted to be a common answer in the previous school sessions. I.e. when asked what they wanted for their community, this was the immediate default answer. The participants were then asked to select a suitable character to convey their ‘big idea’ message (e.g. an object, a building, an image of a celebrity, a person representing a profession, or an ‘aged’ version of themselves). This image (whether it was downloaded from the internet, photographed by the participant or drawn by them) was then uploaded into a free app called ‘Morfo’ (an animation app which allows the user to animate any picture, photograph or drawing by giving them animated facial features such as eyes, nose, mouth, which they can then record a message onto, which is spoken through the character and accompanied by facial expressions such as shock, fear, anger, as selected by the user). Using the app, the participant was asked to record their issue and idea, and add in emotions and effects as they saw fit, resulting in a short film about their issue and idea [fig.36]



Fig. 36 The Morfo app process: 1. Select an image, 2. add features, 3. 3D, 4. add emotions.

Alternatively, participants were also able, if they saw it to be an appropriate way to best explain their issue or idea, to use the 'Aging Booth' app. This app enabled the user to take a photograph of themselves and age it 50+ years, effectively turning them into an elderly version of themselves. The Ageing Booth app was initially used within the Community 21 Heathfield Future Village project in 2011, where it was stated "using 'ageing apps' the team were able to visualize young participants as they might be in 2061, which was all part of the process of enabling citizens to envision the future and what it might be, or should be like" (Community21.org, 2011), indicating it supported the process of envisioning in some way, but didn't clarify how, why or explore its potential in the context of neighbourhood planning. The aged version of the participant was then uploaded into Morfo and animated in the same way. This was one of the techniques used in the Priory school classroom sessions and had been considered successful in eliciting empathic projection towards elderly people living in the community. The participants were also encouraged to use video editing apps to edit or join their videos together if they thought it would help to communicate their message.

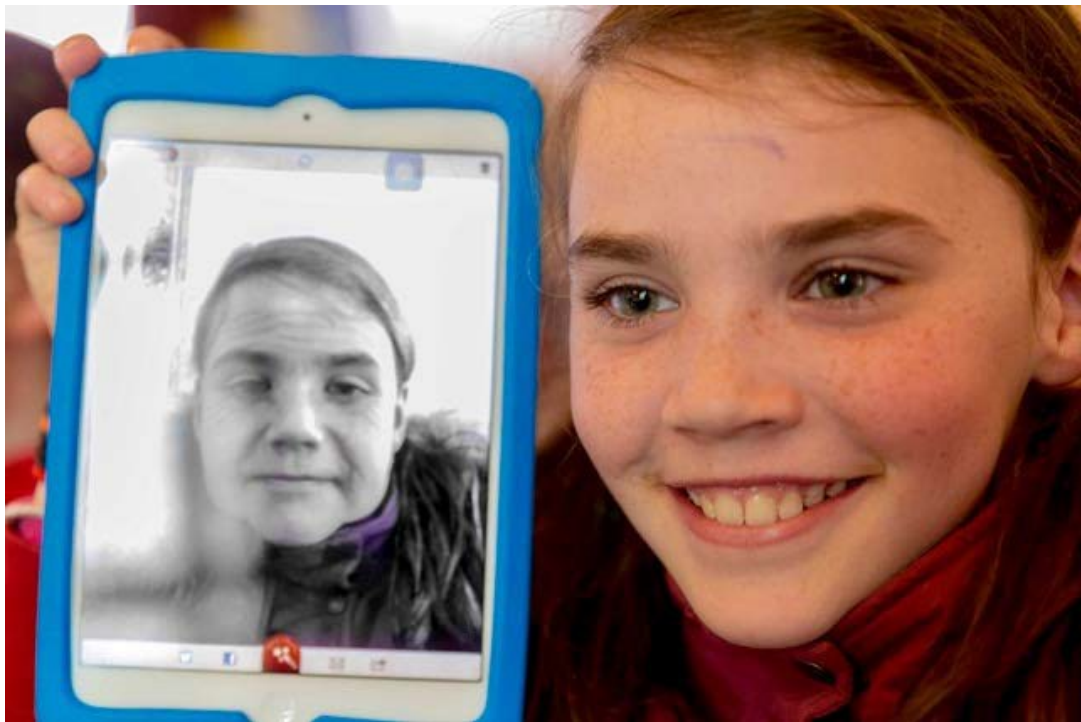


Fig. 37 Example of a young participant having used the ageing app (N. Gant)

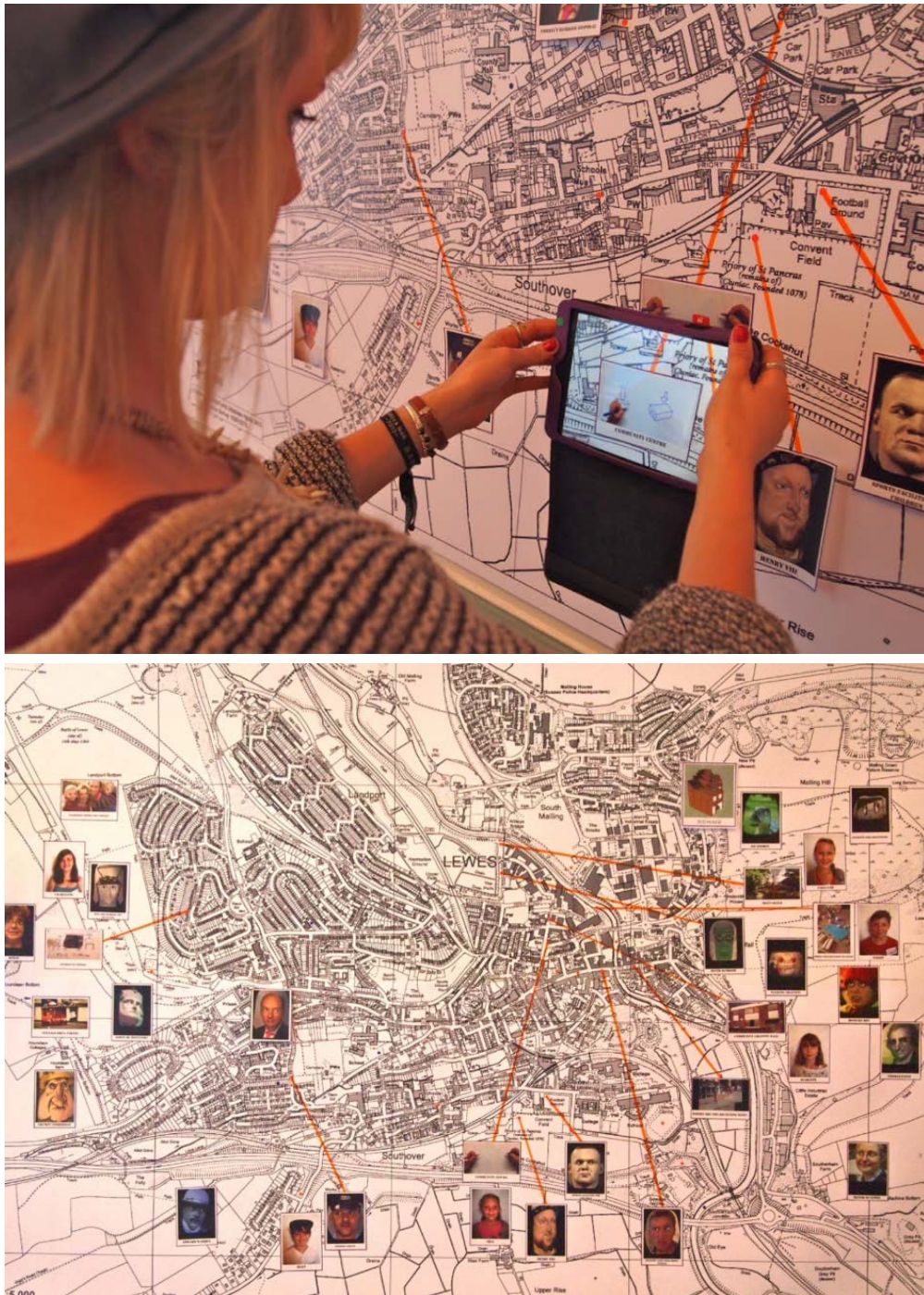


Fig. 38 The interactive Aurasma map of Lewes (N. Gant)

Once the videos had been completed they were added to an interactive map of Lewes (Fig.38) using software called Aurasma. Aurasma is an augmented reality software and was selected for its engaging interactive qualities. Using Aurasma the facilitators were able to assign the short videos created by the participants to a printed image (a 'trigger'), when a camera enabled device (such as a phone or tablet) which had the Aurasma app downloaded onto it,

was held up to the image, the video began to play through the device (an 'Aura'), augmented onto the background of the map. The location of the triggers corresponded to the issue that was being discussed in the video, resulting in an interactive artefact that contained layers of opinions and ideas directly linked to the areas of the map that they were printed on.

Feedback and initial insights

At the end of each day the participants were given a feedback sheet which asked them whether they enjoyed the session, what aspect they enjoyed the most, what they enjoyed the least, whether they learnt anything new and if they had any additional comments. Participants described this session as 'fun', 'useful' and 'interesting', with 5 out of the 12 young people stating that using the Aurasma app was their favourite part of the day and 4 out of the 12 favouring the Morfo App.

The outputs produced included several animations: bins discussing litter problems, animals expressing environmental concerns, police officers discussing traffic issues, families speaking about housing concerns, football stars discussing leisure ideas and local politicians expressing legislative terms. It was through the facilitated discussions that the participants were questioned and prompted about the different issues that might exist in the neighbourhood in which they live and what they could do to address them. As a result, they produced a varied array of subject matter to discuss, for which they selected their own character in the animated videos, but this generated questions regarding the use of characters as the prompts themselves, which was explored in further sessions.

After the Summer School was carried out feedback was requested from each of the facilitators who were present at each session, where their insights and observations were collected. A summary of this feedback is given below, with the full text in Appendix D.

Morfo and Ageing Booth

'[The tool] is actually fairly straight forward to use, and provides amusement for them while simultaneously forcing them to engage with more complex issues in a way they still find fun. Putting themselves into the shoes of others, or even their own but from a different perspective meant they tended to think beyond just wanting the new skate-park'.

Joshua Barnes, facilitator

The reoccurring comments from the facilitators was the engaging nature of this tool; the enjoyment and amusement the young people appeared to experience whilst using it was observable. Due to it facilitating anonymity, the young people were able to be far more

expressive in sharing their ideas, as its use appeared to negate the issues of embarrassment, and made them less self-conscious. The activity of being able to become ‘somebody else’ appeared to facilitate empathy, which suggests that this tool may support in part reflection and the reframing of ideas. The speed at which opinions and ideas could be produced through the device was also commented upon, as the immediacy of the results and the ability to share these results appeared to play a key factor in the willingness to engage. Additionally, the lack of instruction required played a role in the speed of this process. The diversity of the tool’s use was also noted as playing a role in how the young people used it for creative purposes: first they began animating photographs, then self-drawn images, leading to objects and finally a whole building was animated. Limitations to the use of the tools were also observed. In particular, its use without the prior discussion (surrounding the issues and ideas worksheet) and the ‘Issues, tools and audience’ boards were noted as restrictive. The prompts were vital in ensuring that the Morfo videos had relevance to the context of community planning.

Overall the main observations of this session were that the young people engaged with the apps, particularly because they were fun, interactive and new to them, therefore possessing a sense of novelty. Ageing themselves was amusing, having the ability to attach eyes, mouth and a voice to an inanimate object was entertaining. But more than this, it was an engaging vehicle to ensure that relevant outputs were produced, despite the session being quite open in allowing them to choose their own characters. The only prompts at this stage were discussions with the facilitators, the photographs on the ‘Ideas and Issues’ worksheets (stock images taken from the internet), from which the participants could choose just one or many of these areas to discuss. In this activity they decided on their issue or idea first, then chose a suitable character to represent this. The process was successful in terms of anonymity, fun and engagement, but could not really be considered as ‘empathic projection’, as they were merely explaining their own views through an avatar. This led to questions regarding the potential of supplying the participant with a character prompt first, and to express ideas from the character prompts point of view. For example, providing the young person with a police officer prompt to generate ideas surrounding crime and safety.

When using the ‘Ageing Booth’ app there was a different process. The mere act of ageing themselves, although amusing, caused them to consider what it would be like when they were old. When questioned if they would still like a skate park or modern clothes shops when they were in their 60s, the answer was usually that they would not. This enabled them to consider more empathic imaginings and responses towards what the issues and solution could be.

Activity 2: Mood Boards - Physical versus Virtual

As studies into generative methods of ideation indicated the effectiveness of collages in expressing opinions and ideas, this session required participants to reflect on the good and bad aspects of where they live and communicate this through the creation of mood-boards (collages). These mood-boards are a visual externalisation of how the participant perceived the neighbourhood they lived in: the good, the bad, the 'spirit of place', and the physical areas they liked and did not like. Initially the group was asked to create an A3 poster mood board using paper, pens, magazine cuttings, stencils and glue. The participants sat around a large table and using A3 sheets of cardboards, magazines, pens, stencils and glue, they created a poster of where they lived.

After the physical mood-boards were complete, participants were asked to create digital mood-boards, and were given the choice of using a variety of apps to recreate their mood-boards in a digital format. Each participant had access to an iPad/iPad mini, which was connected to the internet enabling them to search for and use the images that they wanted to use. A series of collage/graphic design apps were pre-downloaded onto the iPad/iPad minis for the participants to use, namely: SimplyM Press, Collage Painter, Step Animation and Videolicious (details of each app, their function, and how they were used in the workshops can be found in Appendix C)

This activity sought to gain understanding of how young people reflect on and perceive the place they live and how easy, enjoyably, successfully and appropriately they feel they can communicate this through traditional techniques versus digital approaches. It also offered insight into which digital technologies young people preferred and felt most confident in using. It also sought to understand how the outputs were similar or different as a result of using technology. The second half of the session included a walk around the Phoenix Estate, Lewes, as an introduction to the area they would be focusing on in subsequent sessions.

Overall the young people were engaged with both activities, however they were restricted by both in what they were able to produce (i.e. lack of desired images in the physical activity and operational problems in the digital). Interestingly though, the participants were given a choice in the collage apps they could use and the majority decided to use the one they had never used before (Collage Painter) as it was slightly different (in that it allowed the user to layer up selected parts of images using a 'stencil' feature, as opposed to placing images together on a page, much like physical collaging, which the other apps offered). As a result, they found it slightly more difficult to use, yet given more practice they may have enjoyed it more and

produced more developed results.

In terms of facilitating creativity and imagination, mood-boarding was chosen as a creative act; yet it was not possible to determine whether the digital approach allowed more creativity or imagination than the physical one. What digital apps did offer was the freedom to access any images the participants wanted, yet this would be limited by access to Wi-Fi in practical use. It also allowed more freedom in terms of amending/altering/moving images and text (depending on the app) i.e. more flexibility in manipulating what they were presenting. With regard to Collage Painter, it also afforded the user the ability to manipulate images and 'layer up' images in ways that cannot be done using a pen and a paper. However, it could be argued that the ideas externalised in these digital mood boards simply looked different because they were done digitally, and not because they thought of new ideas or in a different way due to the technological aspect. Upon reflection, the activity probably was not best suited to gaining sufficient insight into creativity and imagination; it was a reflective process, a comment on what the participants' views were on their community's at present, and although a necessary step, it should have been followed up by an activity that asked them to create a mood-board visualising aspirations for the future of their village, their ideas and their vision.

There was only one individual who chose to use video software in conveying their digital mood-board during the activity presentation, which enabled them to change the images as well as add a voice over explaining what each image was representing, which in terms of communication, created a much clearer output that could be understood by anyone who viewed it.

Activity 3: Model making – Physical versus Virtual

Following a visit to the Phoenix Estate during the previous session (an area of Lewes currently under development that was the focus of this Summer School) a discussion was carried out amongst the group regarding what they perceived to be the good and bad points (or as we termed it, the 'Treasure and Trash') within the area and in what ways it could be changed or improved. A group brainstorming activity was facilitated to identify the main issues and concerns and how they could be addressed, then the group was split in two. Group A focused on designing leisure facilities and Group B were tasked with designing affordable housing (two topics selected by the researcher, in order to identify the participants' interest and awareness of these two different issues, as well as being issues mentioned in the current Phoenix Estate development plans and subjects common in Neighbourhood Plans).

The young people were asked to create and communicate their group ideas firstly using

modelling clay/cardboard, to be placed into a 1:500 scale cardboard site model which had been constructed by the researcher (Fig.40), and then using SketchUp software to recreate a fully rendered visual of their design. Both groups worked with a facilitator and were given paper and pens to sketch out ideas and a laptop to carry out further research on existing designs using the internet.

SketchUp, is a 3D modelling software application that is free to download onto PCs and Macs. It has a simple interface that allows the user to create buildings, objects, neighbourhood layouts or products. Within it, it has a '3D Warehouse' feature which allows the user to search for and download prefabricated objects (e.g. furniture, cars, fixtures etc.). The models made can be fully rendered and placed in context using Google Earth. Both groups watched a 5- minute live demonstration by the researcher on how to operate the software before sitting in pairs at laptops and recreating the design they had previously built physically, this time adding more details such as colour, textures, objects and vegetation. The aims of this activity were to understand how the participants developed ideas to problems that had already been identified (concerning leisure and affordable housing) and how they used both digital technology and traditional methods to work collaboratively in generating ideas and communicating them. The aim was also to understand which method the participants preferred to use, which method was more successful in explaining ideas and which method appeared to support their creativity and imagination when creating a collaborative vision.

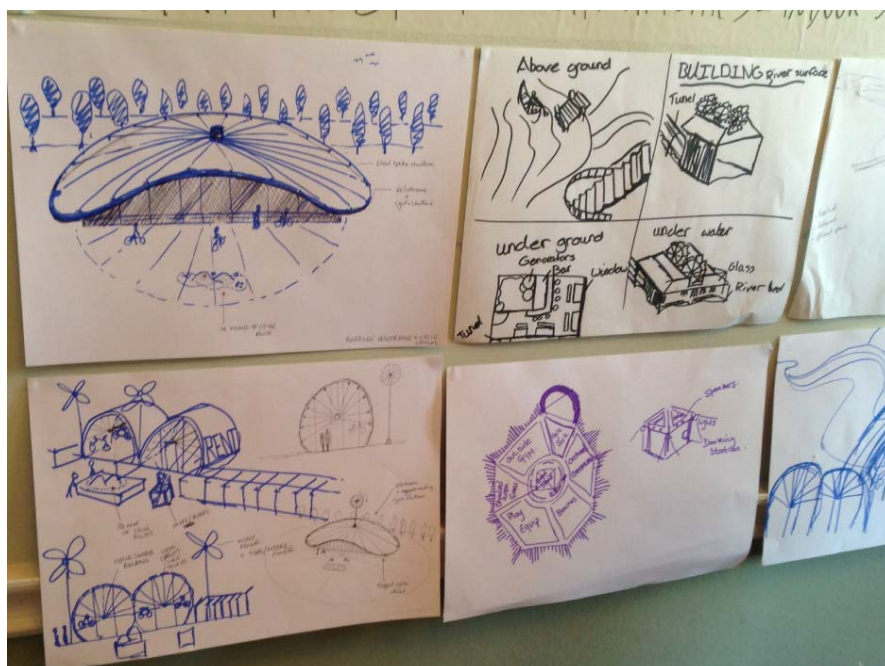


Fig. 39 The facilitated ideation process carried out pre physical or virtual model building (K. Duggan)



fig. 40 Example of participants engaging with Sketchup and traditional model making (N. Gant)

Facilitator feedback

“The initial creative process wasn’t happening at the model making phase (physical or virtual), but during the facilitated discussions at the beginning of the session. These discussions were aided greatly by the use of the internet for example, allowing them to research sustainable housing. It appeared setting them the task of designing ‘affordable sustainable housing’ overwhelmed them slightly and they didn’t feel they had the knowledge to do this. Once a design was sketched out (using pen and paper drawings) they were much more confident at making the clay models and drawing the design up on SketchUp. However, these were more communication tools - not creative.”

Kelly Duggan, researcher, facilitator

Overall the main observation was that neither physical nor virtual modelling alone appeared to assist creativity or ideation. This process occurred when the facilitators were working with the groups, directing questions at them regarding issues and ideas concerning leisure facilities and affordable housing within the Phoenix Estate. It was during this stage that participants used the internet to search what affordable housing consisted of and chose existing examples to use as inspiration. Ideas were initially sketched out on paper, then physical models were made, followed by more detailed SketchUp visualisations. The initial and formative creativity, the ideation and imagination predominately occurred during the group discussions, this is where one idea sparked another and certain ideas only occurred when prompted by the group facilitator, i.e. question prompts regarding the sustainable characteristics of the houses. Another factor that may have limited creativity in this area was the limited knowledge the

participants possessed on issues such as affordable housing and sustainable housing, overwhelming them and causing them to be hesitant about their responses.

“The reinforcement of the fact that the tools in and of themselves do not result in a meaningful outcome - A key aspect of the learning for me is how best to facilitate the 'deeper' reflections or catalyse 'creative' and critical thinking. So overcoming 'skate park syndrome' or just having fun with something. This session highlighted this again - they enjoyed both activities and mediums to a greater or lesser degree - but the issue was how to facilitate deep, creative thinking about the problem in the first place. Neither process did that - it required us to engage them in 'designing'.”

Nick Gant, facilitator

Activity 4: Storyboarding and ARIS Gaming

This session was run by Cathy Grundy, a PhD candidate at the University of Brighton and sought to evaluate the gaming software ARIS as a potential application to support the Community21 website in recording information whist out and about, and to consider the potential of ARIS software for storytelling and reward based games that might add extra motivation for young people to learn about planning and encourage participation. This session required participants to split into groups of 2/3 and in their teams create stories relating to issues in the Phoenix Estate area using prompt cards which had different characters and events written upon them. These stories were then incorporated into GIS (Geographic Information System) maps using ARIS software, by uploading photos, videos, images onto the ARIS online platform it was possible to create an interactive game. By walking through the Phoenix Estate using iPad minis which were 3G enabled, the participants were able to take a photograph at a point of interest and assign that picture to the correct location on the digital map, using the ARIS app. Once back in the workshop room in AirS, treasure hunt style stories were created using these images on the desktop version of ARIS. Although this session was not created and led by myself, I was a facilitator and several of the techniques and methods it utilised are relevant to this research, therefore the session outcomes and observations have been detailed in this section.

Facilitator observations:

“I felt the group needed much more instruction about ARIS and how it could be used. Trying to keep the group focused was a struggle and there were lots of distractions. Although the group

understood that this was a way of "Gaming a Story" they struggled with the interface and were more keen in challenging and being controversial or creating a story which was interesting as opposed to relevant to their brief, such as wanting to explode a duck as opposed to visioning the future of the Pells area." Liz Allsobrook, Airs facilitator

Through the facilitator feedback it was apparent that ARIS held potential in tying the physical and digital worlds together, yet the basic and technical interface did not appeal to the young people. The design of the interface itself was unappealing and not user friendly. This became particularly noticeable due to the stark contrast between that and the interface of the apps which the participants were used to.

There was also a lack of direction in this activity; the young people were asked to create a game story which took place in the local area, but when creating their treasure hunt story lines, the results were focused on explosions and dramatic endings, and less about the context of developing or having a vision for the future of that geographical area. Although the enthusiasm of the participants was encouraging, and storytelling was a useful creative method in terms of communication, the lack of focus on the matter at hand meant that nothing meaningful (in terms on the context) was created. Had the young people been provided with a ready-made 'treasure hunt' to undertake, with a narrative focusing on the buildings and their uses, the participants may have been more comfortable with the format and more intrigued in how to create their own version.

There was far more potential in this method than may have been gained during the one-day use of it. It allows the creation of treasure hunts to be made where digital clues integrate with the physical world. In terms of creativity, this would depend solely on what 'quest' or 'treasure hunt' was designed and what the participants were asked during their hunt. What was gained from the workshop was its usefulness in encouraging the user to reflect on the location they were wandering around, through taking pictures and assigning digital clues to physical locations, it brought the physical world and the digital world together.

Activity 5: Finishing off session

The penultimate day allowed the participants to complete any projects they had begun and not yet finished and to synthesise their skills in enabling compelling and self-defined outcomes via the technologies they had learned. It was also a chance for the participants to use any technologies they had not yet had the opportunity to try. The feedback and evaluations of this session have been included as they offer insight into what activities and tools engaged the participants enough for them to want to use them again. Examples of the work produced includes:



Fig. 41 A SketchUp model of a Boat House, superimposed at Lewes' Pells Pond (K. Duggan)

Facilitator observations:

“This session was useful to observe what tools/apps and activities the participants were keen to use again, and what they wanted to finish off. They appeared more comfortable while working with others to develop ideas and the session saw new apps being utilised (i.e. stop motion animation).” Kelly Duggan, facilitator, researcher

What was apparent from this final day was the ability of the participants to see the value of getting two apps to interact with each other and how animations could be used to tell a story

and share a message. This was by far the most creative session, and the young people were largely self-motivated to go off and work on the projects they wanted to improve, or work together in teams on something new, suggesting that there is a benefit to allowing young people some creative freedom in these activities. For example, one group took themselves off with the video cameras to interview each other about the session and the ideas they had made for the area. They also brought new apps into the process, suggesting the use of Stop frame animation and collage apps that they had previously found simpler to use.

During the final session the Morfo App remained a favourite amongst the participants, as well as SketchUp and Aurasma. All the outputs produced from the sessions were collected and augmented onto the large plan map of Lewes, creating an interactive map that when used with the Aurasma app, contained opinions and ideas regarding what existed in Lewes and what these participants believed should happen in the future. The use of digital tools enables the views of the participants to be shared both through a physical object and online, potentially reaching a greater audience.

4.4 Insights from ‘Digital Citizenship Summer School’ pilot study

After the workshops were completed, each of the facilitators was asked to reflect on what they believed to be the top three lessons learnt from the workshops, regarding the methods and techniques employed to engage and include young people in the community decision making process, and the results are as follows:

	Lesson 1	Lesson 2	Lesson 3
KD	Although the sessions provided insight into young people's opinions of their neighbourhoods, more consideration needs to be made regarding what these opinions mean. A way to elicit a deeper reflection, to encourage creative ideas - the tool will have to take them through a journey, a process.	The use of tablets appeared to excite and engage the participants, however if using a variety of apps, it would seem to be more productive to use ones that are simple, easy and intuitive, or allow more time and instruction if trying to introduce a new one - to prevent participants becoming frustrated and disengaged.	By making the tasks less ambiguous, and giving more thought to what outputs will be produced and what they may tell us, may prove of more use to the research. Sometimes the participants appeared overwhelmed and required a great deal of facilitation.
LA	Tablet apps work well in large groups, because the results are instant and only restricted by the ability to use them or how creatively the individual thinks about them. Prompt questions helped focus participants' thoughts, as well as encouragement to be more creative in their visions and ideas.	Computer based software relies on a lot of technical knowledge and when they glitch, this causes a lot of problems, including losing time and focus. It is a luxury to have a group of young people together for one whole day, let alone 6. Some of this work would not be achievable in a 2 hour youth club session, but with instruction could be something that individuals could go off and create to bring back.	Instruction about how to use and what to do with the apps need to be more focused, along with what are they participating in and why. There were some assumptions that the group would know what to do with the technology. Also a way of capturing the some of the discussion process - "What are you going to do? Why that idea? What the idea is? How can that idea be taken forward?"
NG	The use of Morfo for animating and narrating objects and buildings as well as drawn characters, found images and manipulated portrait photos.	Computers and computer based software is often too complicated and demanding for short interventions or workshops and therefore not transferable to the toolbox.	Processes still need to focus on the facilitation of creative thought and deeper reflection.
JB	Digital apps/tools have to be intuitive and easy to understand/use. Otherwise they [the participants] get bored.	Morfo provides amusement while also encouraging them to engage in complex matters more.	Getting kids to understand what steps they need to take for their ideas to be heard is key.
HA	The combinations of the simple apps to create more complex ideas.	ARIS was good, however wasn't fully effective as it was more complicated and needed more time spent on it to come out with the outcomes, also needed to be on one map instead of two/three.	Having Interview tags on the map. Maybe should be more colour coded.
JP	It appears that they have a natural affinity with the IOS system whereas video editing on computers seems lethargic in comparison so maybe stick to the tablets.	The fact that the apps can be combined makes it more personal as each iteration allows more of the person to come through and less of the operating systems.	On the last day, when they were left on their own they lost track of time and fully embraced with the sessions. This could be because the format of sessions had become routine or it could be that it becomes less like school when there isn't a set routine of what to do. So a more freeform approach may work."

Table 5. Top three lessons learnt from preliminary workshop facilitators

Overall the common themes in the feedback can be summarised as:

- The use of tablets, when simple and easy to use, work well in keeping groups of this size engaged and focused on the task in hand.
- Computer based software (ARIS and Sketchup) is perhaps too technical and too demanding of the participants to be useful for a short intervention.
- There still remains a gap surrounding how opinions become visions, this requires a deeper reflection and creation process, which is difficult but necessary to facilitate.
- There needs to be a stronger focus/instruction provided to the young people of what is expected from them in the task and why it is purposeful.
- The Morfo App is useful in supporting character and narrative creation, as is the ability to combine the app/outputs of the apps together

These initial reflections were followed by an evaluation meeting attended by members of AirS staff, University of Brighton staff, and student facilitators where the outcomes of the workshops were discussed in order to move forward the design of the Nominet 'Digital Citizenship' tool. Again I was there as both facilitator of the Nominet project, but also researcher in relation to my research. The main points from that meeting were as follows:

- Ageing and Morfo appeared useful in eliciting empathy (of being old), but could it do more, could the choice of characters play a stronger role?
- The fact that opinions are not visions was reiterated (yet we need opinions to create visions, and visions then incite further opinions) - this process needed untangling.
- The consultation needs to be age appropriate.
- Speed and engagement versus sustaining behaviour, particularly when engaging younger groups.
- Prompts are necessary, but the questions really sit around what they should be?
- The output produced needs to translate to Neighbourhood Planning steering groups and decision makers – what information will they be shown, how will they respond to it and what will they make of it?
- There will always need to be some form of facilitation but this will be determined, to an extent, by what is included in the tools design.

In terms of addressing the research questions, the workshop offered insight into several areas. Firstly, it appeared that prompts were vital to the process of forming a vision; they were what ignited the train of thought, and were the bases for the ideas to be built upon. The prompts in

the sessions were in several forms: images and written questions posed on the 'Ideas and Issues' worksheet, verbal questions asked by facilitators during discussions, characters (manipulated photographs) prescribed to participants and scenarios given to participants to work within. These prompts potentially work in two ways, that of opening up an avenue of thought that a participant had not really considered, or that of being so focused that it leads the participant to a certain outcome. Although outputs need direction in terms of being relevant, care has to be taken not to lead the participant to a certain conclusion; participants should be nudged to think. The processes that different tools supported were also important, and how they directed the journey that the participant embarked on (particularly in terms of creating a vision). In order to create a vision it seems that several activities needed to be followed, i.e. a context or situation was required to frame the discussion, reflection was required in order to identify an issue and form an opinion within this context, questions/prompts were required in both the reflection and 'idea' stage for the participant to firstly form an idea, then prompt them into deeper thinking and imagining (either by empathic projection, or new information they had never considered before) in order to reframe their perspective to produce ideas beyond their initial "I want a skate park" response. Apps that were supported by tablets and mobiles were deemed more successful than the more technical software supported by PCs; they were more intuitive, more focused, easier to learn and a lot faster in producing results which was key to keeping the young people engaged and focused. Apps could also be used in conjunction with each other, adding not only another layer to the experience but also forming a process/journey through the use of several apps in succession.

One of the most notable uses of digital technology, in terms of eliciting imagination, was the use of Ageing Booth and Morfo Apps. Observations suggested that the participant's imagination was stimulated not just by taking the role character, but being able to embody it, by controlling what it says and emotions it conveys and creating a narrative using this medium. This went as far as adopting certain voices they believed suited the character and how they might think, feel and respond to a situation. In several cases this caused the participant to consider what they, as themselves, would want for the future of their communities, but when seeing themselves as an older version, often their ideas changed completely, in some cases contradicting their original idea. Of course, using personas to stimulate empathy is not new. By providing information regarding the type of person who will face the consequences of design (idea), it encourages participants to think about how a potential design would affect someone else, which was found to support creativity in generating alternative solutions (Visser and Stappers, 2007).

Moving forward

This preliminary study produced several insights and provided some useful information that can be used to shape the following workshops. Moving forward with the research, it appears that a greater focus is needed on what prompts could be supported/afforded by digital technology that elicited deeper and more creative ideas and imagination processes useful in transforming opinions into visions. Morfo and Aging Booth appeared to ignite new ideas within the young people, regarding what they wanted for the future of their neighbourhood and suggests a potential use for reframing, but how far could this be taken? A loosely structured process was followed within this study, but there were several repeated activities and some jumping between stages, therefore future workshops will be more structured in order to gain a rigorous level of insight to address the first research questions.

Several questions were created by this preliminary study surrounding both process and digital technologies application, for example, could a reversed process (i.e. 'youngify') carried out with elderly people produce the same results in terms of reframing perspective? Furthermore, what prompts and what questions should be asked, and how are they integrated into or supported by a digital tool or app? Does a new app need designing, or will the tool simply guide a process and link to existing apps? Further investigation also needs to be conducted into the usefulness of these animated idea outputs. Does their ability to be saved and shared instantly and discussed by many in real time, mean that others such as adults, steering groups and decision makers will engage with them? The animated character videos produced so far (referred to throughout this paper as 'talking head' videos), are currently the externalisation of the idea/opinion of an individual, in what way can they be used or created to encapsulate and represent the view of many?

The preliminary study ultimately led to the design of Envisioning Framework Version 1 (fig 42), which set out the different stages of the envisioning process (identified in the literature) and began to match different potential activities and tools (as tested with the participants) that appeared to facilitate these stages. In order to create the digitally supported process for the following workshops.

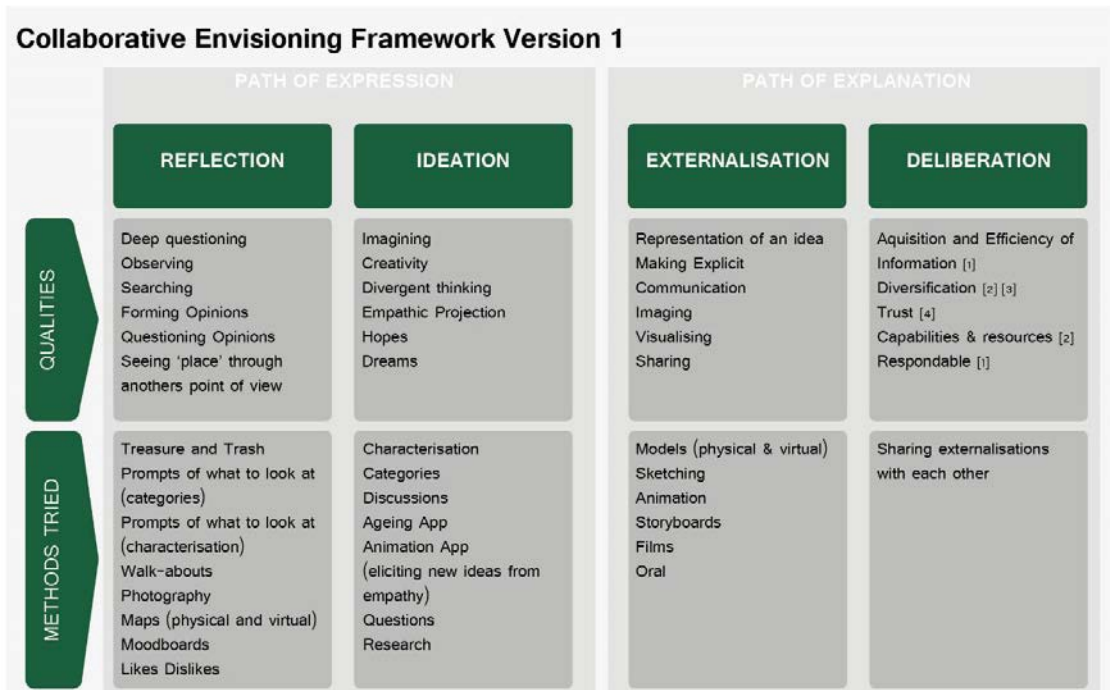


Fig. 42 Envisioning Framework Version 1 (initial iteration), Duggan, K. (2015)

The following chapter details how the framework was used in subsequent workshops and the data it generated from this Envisioning Framework (and the later iterations of it).

Chapter 5: Workshop Findings

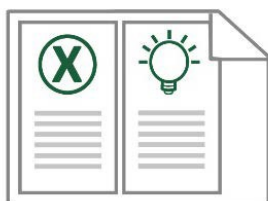
Following the preliminary workshop several digital tools were identified as being valuable, and the initial Envisioning Framework (digitally supported process) was designed. This digital toolkit was then utilised within different collaborative planning and envisioning situations (the workshops). An overview of the aims of each workshop in relation to the research questions is set out in the 'design brief' which correspond to the different frameworks and the different activities they use. These design briefs are highlighted at the beginning of each workshop alongside the activity icons set out below, the findings of these workshops are presented in a thematic description of each session. Themes identified will be outlined, discussed and critiqued against the research questions in the following chapter.

Key of activities: The activities utilised in the workshops are detailed below and visualised through icons, these icons are used at the beginning of each of the workshop finding sections to signify what activities took place. The descriptions below also identify what apps each activity incorporates.



Treasure and Trash:

This activity was identified as supporting Reflection. Reflection assists people stating what they perceive as the positive and negative elements of their neighbourhood, in order to identify what can be addressed.



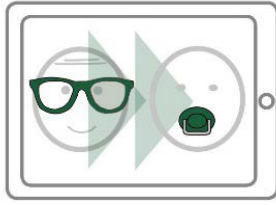
Issues and Ideas:

This activity was identified as assisting the movement from Reflection into Ideation. The participants select what they perceive as the main negative/issue with their neighbourhood and then state what intervention/solution could address this.

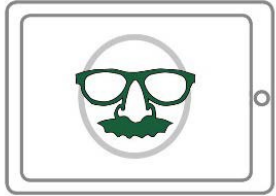


Empathic Ideation – Ageing Booth App and Morfo App:

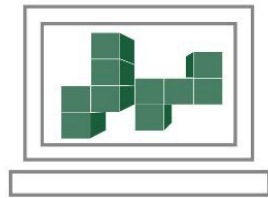
This activity was identified as assisting younger participants in divergent thinking. By considering the needs of older people, and what they might perceive as issues within the neighbourhood, it enabling them to generate alternative ideas which were not previously conceived.



Empathic Ideation – Youngify using Morfo App:
Taking inspiration from the previous ‘ageing’ activity, ‘Youngify’ seeks to understand whether animating a photograph of their younger selves, assists older people in considering the perspectives of young people, understanding their ideas and in generating a shared vision.



Empathic Ideation – Characterisation using Morfo App:
This activity was again identified as assisting young people in considering the point of view of others who may reside in the neighbourhood, yet there were questions surrounding which prompts were most useful in encouraging divergent thinking, without leading.



Gamification using Minecraft:

This activity was selected due to the potentials suggested by the literature. Minecraft is considered a creative design game that offers virtual, collaborative building which is considered to potentially assist Externalisation, Deliberation and Evaluation.



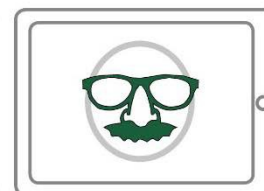
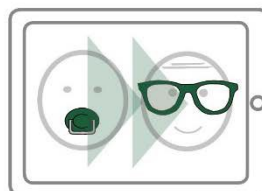
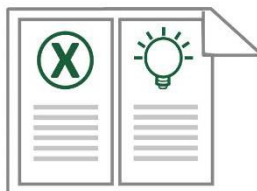
Evaluation:

This activity was carried out in the form of a presentation, whereby participants demonstrated and explained their visions and the rest of the group was able to provide feedback and comment on how suitable the idea was.

5.1 Workshop 1 Nutley Youth Group



ENV1: This workshop set out to assess the initial envisioning framework activities Treasure and Trash, Issues and Ideas, Issues and Ideas using empathic projection (Ageing Booth App) and Issues and Ideas using image elicitation (Character prompts), to address RQ2 surrounding creativity

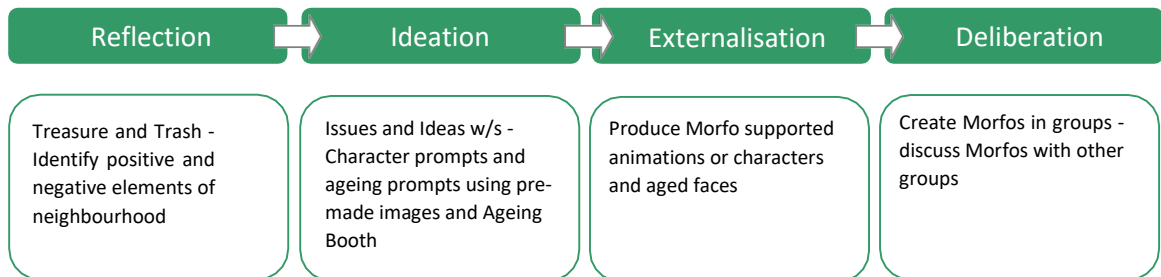


Location: Maresfield Village Hall | Duration 1.5 hours | 19th May 2014

People Present	Identification	Role
Kelly Duggan	KD	PhD Candidate/Project Designer
Faustina Bay	FB	AirS Community Engagement Officer Workshop Facilitator
Cell Etheridge	CE	Pulse Youth Group Leader
Participant	Group	M/F
G101	1	F
G102	1	F
G103	1	F
G104	2	M
G105	2	M
G106	2	M
G106	2	M
G108	3	M
G109	3	F
G110	3	M

Opening Presentation

The session began with a welcome and introduction by FB, KD then presented the short animation explaining the context of community planning (Appendix E) and an overview of the activities which would be taking place. The workshop then followed the process as set out in EFV1:



Activity 1: Treasure and Trash (Reflection)

Despite the initial presentation listing the different areas, the young people appeared to identify only the places which they personally used as being treasures, particularly those they enjoyed using; the village hall, for example was treasure, because they used it for their youth group sessions, alongside the park, their homes, the shops that they visited regularly. Similarly, with the areas considered 'Trash' were the experiences they had in certain places i.e. school - which they may not enjoy.

Example of listed Treasures

Village Hall – because it's used
Hempstead Park – because we use it
Uckfield Cinema – closest to us
Strawberry Hill – because I love strawberries
My House – It's epic
Mr Patel's shop
Parklands – Friendly people

Example of listed Trash

Uckfield Community Technology College – needs more opportunities
Toilets – should be turned into information centre because it's trashed
School
The xxxxxxxx because they nick things*
Parklands – no welcoming people

The participants expressed some difficulty in using the maps to identify where things were. To assist them in locating themselves at the beginning of the session, the Village Hall had been marked on with a sticker, yet the Neighbourhood Plan of Nutley covers three different parishes, therefore includes areas of land that the young people may have no knowledge of, which seemed to have contributed to the difficulty in orientating themselves.

*what has been removed is a derogatory racist term one group of young people used for a travelling group that were at that time residing in the area.

Activity 2: Issues and Ideas worksheet (Ideation – non prompted)

The participants wrote their issues and ideas out on separate worksheets (as shown in Fig.43) and were responding to the question **‘What is YOUR big issue, what concerns you most about the place you live. But most importantly, what do YOU think can be done about it?’** The individual responses, though slightly varied, followed a similar theme of leisure activities, with each group having a distinctive focus. For example, for the three girls in group 1, the most significant issue was the lack of shopping and leisure facilities in the village, and the big idea was to build some.

G101 Idea: I think that we should have some shops because they are too far away. I would also like a skate park because then more people would come to Maresfield.

G103 Issue: There are not enough shops in Maresfield and too many houses and parks

G103 Idea: To get rid of some parks and land, then put [in] a Tesco

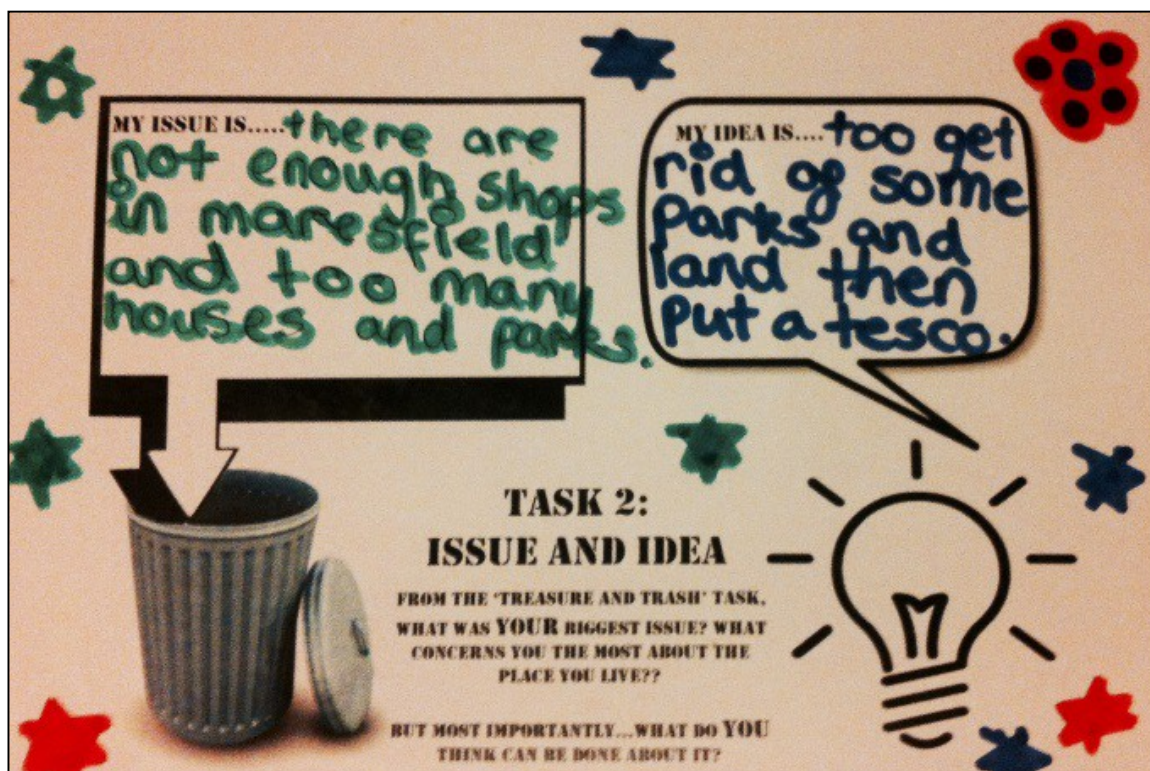


Fig. 43 G103 Issue and Idea (unprompted) worksheet (K. Duggan)

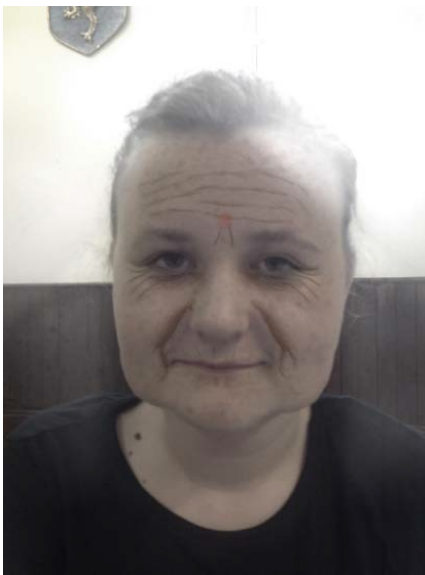
The overarching issue and idea theme described by the young people was the lack of leisure activities, to which they responded by producing suggestions of what they would like to see in their village. This 'wish list' response had been a concern of the Nutley NP steering group, who'd claimed that the problem of asking young people for their ideas is that you get more of an unrealistic 'shopping list' consisting of places which support the activities they enjoy and wish to do more of. Although this view was supported by the feedback from the young members of the Pulse youth group, it doesn't make their comments any less valid. If young people are claiming they want more shops and activities, then it is a big indicator that they are currently bored and dissatisfied with what is currently available to them.

Activity 3: Issues and Ideas (Ideation using Ageing Booth – prompted)

Each of the participants (and adult helpers) had a turn using the Ageing Booth app, yet only one image per group was chosen to put into Morfo due to time restraints. Through this one animation the group's ideas were communicated collectively. Some groups wrote a script which was formed by discussing each of the individual group member's ideas, other groups each spoke their own idea into the Morfo recording app. The process of ageing your face was one which engaged every young participant. Generally, they found it amusing, entertaining,

and in some cases slightly horrifying. Interestingly, the adult helpers were just as keen to have their faces aged, having the same amused response as the young participants.

The ideas for the town did change when the participants went through the ageing app activity. The main insights were that young people had a limited level of understanding about older generations, particularly about what they did and what they needed. The young people appeared to perceive elderly people as fragile and in need of care, suggesting care homes and walking stick factories. There was also a degree of silliness in their responses, often suggesting ideas merely to make their other group members react and laugh.



For example, the transcript from Group 1 was as follows:

"Elderly people would need care homes, pastry shops, bread factory, knitting shops, coffee shops, Botox and fat suction factory, and walking stick shops."

This transcript was from the group of teenage girls. Their ideas included elements that neither of the other two groups mentioned: 'Botox and fat suction'. This group was the most horrified with their aged appearance, with two members of the group refusing to save their aged faces to the device's gallery, although they were thinking

in terms of what an older person might want, they were still forming their ideas through their own perspectives and frames of what is important.

Feedback Sheets

The feedback sheets completed at the end of the session posed questions in order to understand the activities the young people engaged with, by asking them which they found the most enjoyable/ the least enjoyable, which were creative, which were useful for explaining ideas, and which they would use again. Of the ten participants, six found the Ageing Booth app most enjoyable, with the remaining three offering a more general response of 'using the tablets' or 'the iPads, coz it was fun'. The Ageing Booth app was also the App that the majority of participants would use again. The least enjoyable was the Treasure and Trash activity, with the majority responses stating that it was difficult or that they were bad with maps.

Key observations and insights

Creativity: Deeper reflection

- The reflection stage is important in identifying and understanding what perceived problems are, in order to identify what can/should be resolved/addressed. Using the Treasure and Trash approach as described in this session was limited, firstly the young people found using the maps difficult (this could have been due to scale, or general map reading ability), the participants were also asked simply to identify what they deemed to be good or bad (treasure or trash) from a personal point of view; there was no facilitation (by the tool or facilitators) prompting them to think beyond this, i.e. what is environment treasure? What is services treasure? This may have caused the limited responses.

Ideation:

- The Issue and Idea worksheet was useful as an initial starting point, but limited for several reasons. Using a worksheet format caused complaints from several of the young participants; it felt too much like school work in what was essentially their free time. The worksheet also relied on spelling and language skills, which concerned some of the participants who did not feel as confident in their abilities in this area.
- The ageing Booth App, used in conjunction with the Morfo app grabbed the attention of the young people (and adult facilitators) in terms of its novelty and amusement factors. However, once this initial excitement was over it did appear to support empathy for what they may want in the future.

Value of a Process:

- This workshop identified that following a process is important. The young people needed to reflect on what is good and bad in the place they live before they can produce ideas or visions for how it should develop. That said, there seemed to be difficulty in reflecting in a meaningful way with the group of young people, with their views almost solely limited to leisure activities.
- This workshop did not really produce 'visions' and certainly not 'shared visions'. The ideas produced by the groups varied in their level of collaboration. Group 1 was the most successful in producing a collaborative idea, but this was done via discussion and note taking before they picked up the tablet to record anything into Morfo.

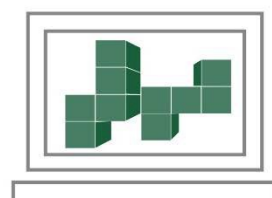
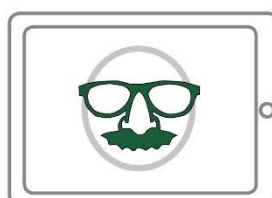
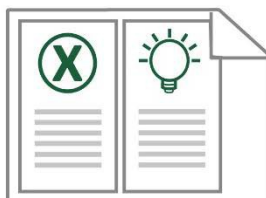
General observations:

- Although observations were made throughout the workshop, some of the discussions were missed. This meant having to rely solely on what the participants had written down, which limited the data gathered in terms of ideas and also how the interaction with the digital and non-digital tools affected this. Future workshops will have to consider the data collection techniques in order to capture more of this information.
- Future versions of the workshop should include a deliberation stage, in which ideas are discussed, shared and built upon collaboratively.
- The workshop did suggest that there is potential in the ageing booth app to elicit empathy and have the young people thinking beyond their own needs, yet there remain questions surrounding whether they truly are altering their opinions, or merely completing an activity they have been told to do.

5.2 Workshop 2 Minecraft Easter

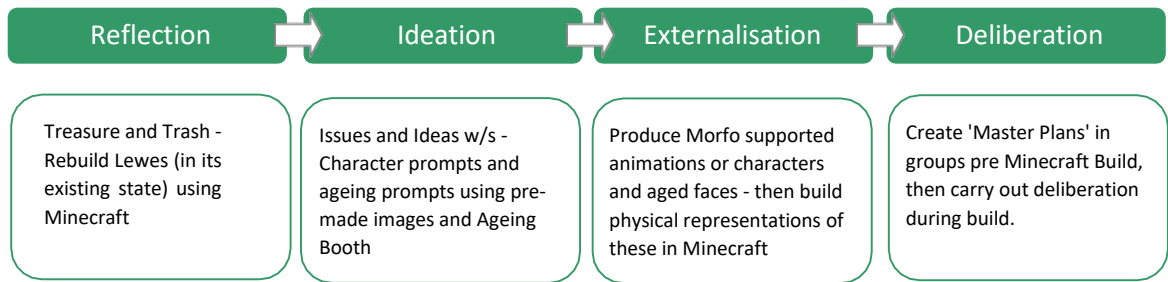


ENV1: This was an extension to YDCW. It introduces 'gamification' into the envisioning process to understand how it supports reflection/ideation/externalisation and the addition of deliberation, through the use of Minecraft (RQ3). It also explored the use of characterisation prompts further (RQ2).



Location: University of Brighton Digi Hub, April 2014					
People Present		Identification		Role	
Kelly Duggan		KD		PhD Candidate/ project designer/ facilitator	
Nick Gant		NG		Researcher, project designer, facilitator	
Joseph Palmer		JP		Undergraduate Student UoB/ Minecraft facilitator	
Liz Allsobrook		LA		AirS, Youth Engagement Officer, facilitator	
Megan Leckie		ML		Blockbuilders, Minecraft facilitator	
Group 1		Group 2			
Participant	M/F	Participant	M/F		
G201	M	G210			
G202	M	G211			
G203	F	G212			
G204	F	G213			
G205	M	G214			
G206	F	G215			
G207	M	G216			
G208	F	G217			
G209	M				
G210					
G211					

Procedure:



This workshop took a different approach to reflection, replacing the Treasure and Trash activity with rebuilding Lewes in Minecraft. This was done for several reasons: in order to have an existing virtual version of Lewes to use later in the workshop, and due to the fact attendees at this workshop had attended YDCW workshop and had already undertaken the treasure and trash activity, so it was pointless to repeat that. The main reason however, was to understand the value of rebuilding Lewes as it existed, as a means of reflecting. Block Builders had created the base and guidelines for the Town, the participants had to build in the facades of the buildings using Google Earth and Google images of Lewes. This was deemed to be a useful activity, as it prompted young people to look more closely at the buildings they walked past often, stimulating questions regarding what they were used for, what they were made of, and elicited judgments of 'that one's horrible, I'm going to get rid of that one'. Having them rebuild their existing town made them reflect more closely on what was there and was quite useful as an exploratory activity.

Activity 1 - Group 1: Using the Invision app prototype which had been created by myself (shown in Appendix E) to explain the process of neighbourhood planning, and the importance of considering the opinions of others (i.e. what other people might consider as a problem and, in turn, the solution), the participants were asked to complete a sheet to describe their own issue and idea surrounding the place they lived (sheet below, fig.44). Following this they chose a character from the app prototype to use as a prompt, and produced an issue and idea from the perspective of this character.

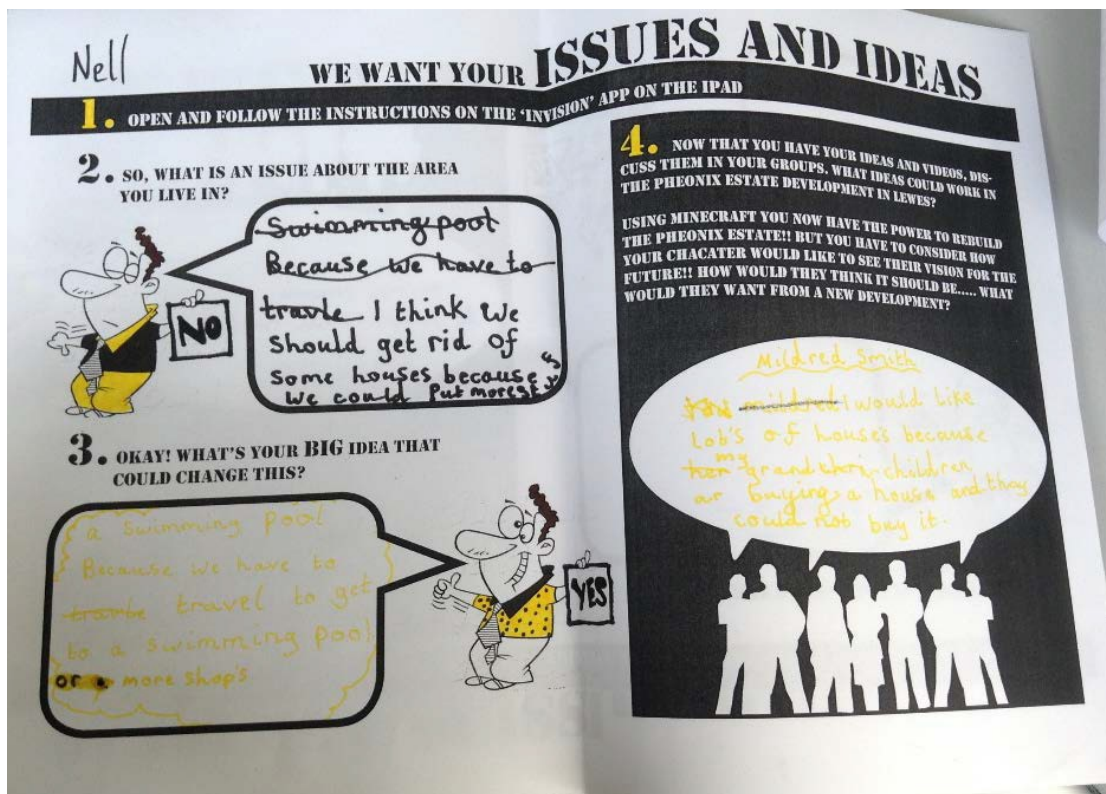


Fig. 44 Issues and Ideas Instruction Sheet, Duggan, K. (2014)

Group 1 was made up of those young people who had not attended the Young Digital Citizenship Workshop (YDCW), and despite living in the areas surrounding Lewes (plus a couple who lived in Brighton), this meant that they might not have an awareness of the Phoenix Estate and the developments which existed there. Therefore, this activity asked them to consider their own neighbourhood when thinking of their issue and idea and as a result skipped the Treasure and Trash activity.

Despite the illustrations within the Invision 'app simulation' citing several different examples of the areas that the participants could consider (transport, economy, energy, etc.), the majority of 'issues' were again similar to the Maresfield workshop, related to being bored. Five of the nine participants who completed the activity stated that there was 'nothing to do', and the ideas to address this were focused around the creation of spaces for leisure activities such as swimming/shopping/skate park. These ideas were mainly put forward by the participants from rural villages, whereas participants who lived in more urban environments (i.e. Brighton), did focus on environmental concerns such as litter, traffic and green spaces. There is, of course, no right or wrong answer and the young people do appear to be vocalising what they consider to be a real problem surrounding lack of stimulation in their neighbourhoods, but it does support the previous findings that deeper consideration into future issues requires a greater level of

facilitation or prompting either through the apps process/imagery – or directly from the facilitator.

The second stage asked the participants to think about their issues and ideas from the perspective of somebody else using a character prompt, and create an animation of this character using either the 'ChatterPix' app or the 'Morfo' app. The purpose of this activity was that if they considered someone else's view on an issue they might have a different idea to address it. When asked if the character would have the same idea, the resounding answer was that no they probably would not. Yet when asked what the character's idea might be, they seemed to struggle putting themselves in that other person's shoes. The participants were provided with character fact cards which aimed at prompting certain areas of consideration (details that explained their likes and dislikes, their family unit, their jobs), to build a more complete insight into the character. However, the facts may have been too leading, as the participants seemed to take one statement off the sheet and use that as an idea, again indicating an alternative prompting approach is needed.

Regarding the use of the character prompts, the young people appeared to struggle in putting themselves into the position of the character. Similarly, to the previous workshop, the ideas and issues they expressed were ones which had been written down on the character information sheet. It would suggest that this approach is not only leading, but also does not appear to elicit imagination or creativity, and in fact, restricts it. The only characters where it appeared to facilitate imagination (i.e. suggest an idea that differed from the text on the character card), were the ones where the young person could identify with that character i.e. the teenage school girl reminded certain individuals of their older sister, and therefore they were able to relate to what her and her friends talk about and therefore articulate what they might want. The characters were all predefined, animated 'cartoon' style depictions which the participants may have had difficulty in identifying with and another graphic style may be more appropriate. Another factor was that the young people in this group were aware of the other group working on Minecraft and were eager to join in, demonstrating the draw of Minecraft in engaging certain people, but the lack of focus or enthusiasm they have for other activities.

The age of the participants may have affected this activity, ranging between 7 and 12: it can be a difficult task to imagine at this age how you might live and deal with issues of the future. Using the same process with a slightly older group will offer insight into whether those young people with more experience can develop different ideas. That said, the more time spent speaking with the participants about their character and about how the participant's ideas

might affect them, and relating the characters to the participant's parents/grandparents and older siblings, the more ideas started to come through, such as the need for houses for grandchildren and allotments, for example:

G204 Issue as self: *Nothing to do except tennis and football*

G204 Idea as self: *A swimming pool*

G204 Idea as character (Mildred): *More buses so I can do my weekly shopping as my arms are weak.*

G207 Issue as self: *All the houses are the same – pretty boring*

G207 Idea as self: *Build odd coloured and shaped houses, bigger pavements and more space*

G207 Idea as character (Mildred): *Build more special places for people when they want quiet.*

G203 Issue as self: *Get rid of houses – to make room for stuff*

G203 Ideas as self: *A swimming pool, because we currently have to travel to get to one.*

G203 Idea as Character (Mildred): *Mildred would like more houses for grandchildren.*

Whilst participants G207 and G203 used information directly from the character card, participant G204 imagined what else might be an issue for Mildred (such as going shopping) and had the idea of an improved bus schedule.

Mildred Smith: Elderly Lady



Age: 74

Occupation: Nana
extraordinaire

Lives: With cats Rosie and Jim

Likes: Peace and quiet, walks with her grandchildren, the odd sherry. Dislikes: Her gammy hip, people rushing everywhere, heating bills Most likely to say: "oh – now where did I leave that?"

Fig. 45 Character card example Mildred Smith, Duggan, K. (2014)

Jim Bricks: Planning and Building



Age: 41

Occupation: Local Builder

Lives: with wife Jan and daughter Molly (13)

Likes: A game of Saturday footie, roast dinners, banter with the boys

Dislikes: Worrying about where the next jobs coming from, vandalism and theft on site.

Most likely to say: "You are 'avin a laugh, mate"

Fig. 46 Character card example Jim Bricks, Duggan. K. (2014)

There is a similar response with the participants using the Jim Bricks character card (fig. 46)

G202 Issue as self: *Nothing to do, busy traffic*

G202 Idea as self: *Traffic lights, anther park, more shops*

G202 Idea as character (Jim): Better Police Station, football stadium

G209 Issue as self: *Not enough fields, too much traffic*

G209 Idea as self: *More open space*

G209 Idea as character (Jim): More houses

Participant G202 read that the Jim character card stated that his dislikes were 'vandalism and theft on site' and as a direct result suggested that he might want a police station. Similarly, the participant also saw that Jim enjoyed a game of football, and suggested a football stadium as a solution. Having read Jim's concerns over 'worrying where the next job is coming from', participant G209 also developed their idea directly from this, suggesting that more houses (for Jim to build) would be the solution that Jim would want.

Although G202 and G209's ideas are changing, this approach is too descriptive, with the participants merely identifying the problem and then producing an idea that is directly related to that. They are not necessarily being prompted to think laterally, as the ideas they provide are lifted directly from what is on the sheet. However, if this new perspective is resonating with them and can be carried through to the next activity, then it holds more value.

Group 2: Activity 1

Group 2 had already been through the Treasure and Trash, and Issues and Ideas processes during the YDCW. They also had knowledge of the Phoenix Estate having visited and having begun to shape their ideas on that site specifically. The general opinion of the Phoenix Estate in its current condition was that it was run down, dirty, quite dark and scary in places, there wasn't a lot for people especially young people to do there. Their ideas to improve the area were discussed as a group and used to create a Master Plan for the area in activity 2.

Activity 2 (both groups): Master Plan of Phoenix Estate

Using Google earth on the PCs and iPads, the groups located the Phoenix Estate area of Lewes and a volunteer from each group undertook the job of 'draftsperson'. The basic existing outline of the Phoenix Estate was copied out and the groups then discussed, using their ideas from the previous activity/previous sessions, what should be in their new Master Plan for the area. The Master Plan below was created by Group 1 who had undergone the characterisation process, it contains a shopping centre, allotments, park (skate and children's), forest, wind turbine, river side shops, communal seating areas around fountains and museum.

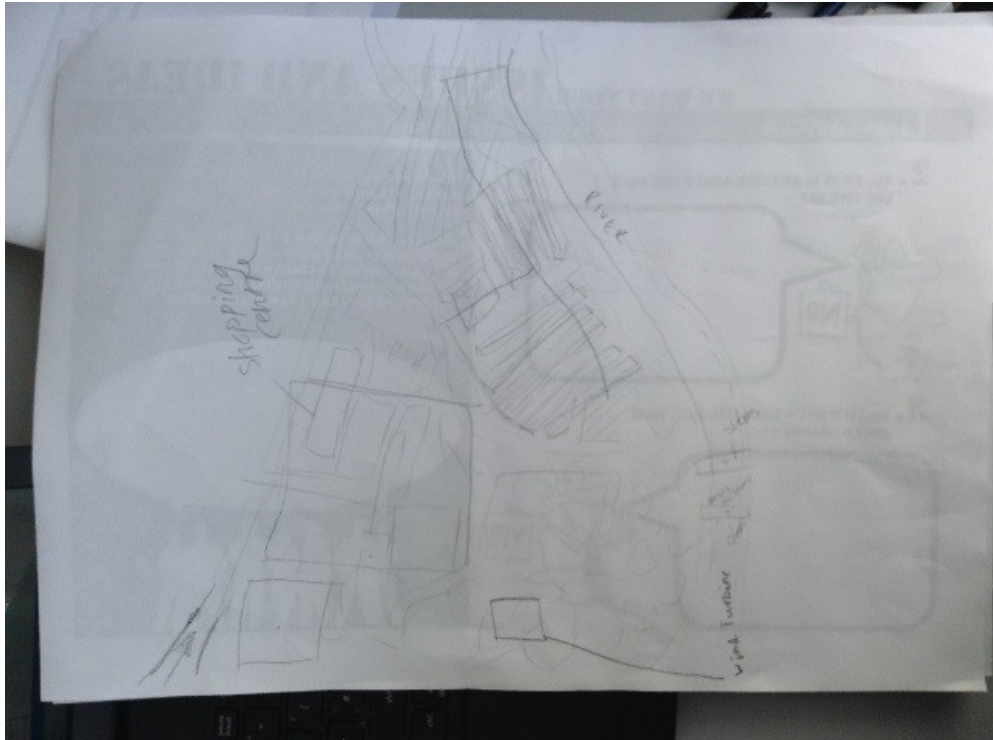


Fig. 47 Master plan of phoenix Estate Group 1 (K. Duggan)

Group 1 were using their own ideas that day (but had previously visited and discussed the several elements of improving the Phoenix Estate). They planned to build a large park, a beach with a boating area, shops, car parks and roads.

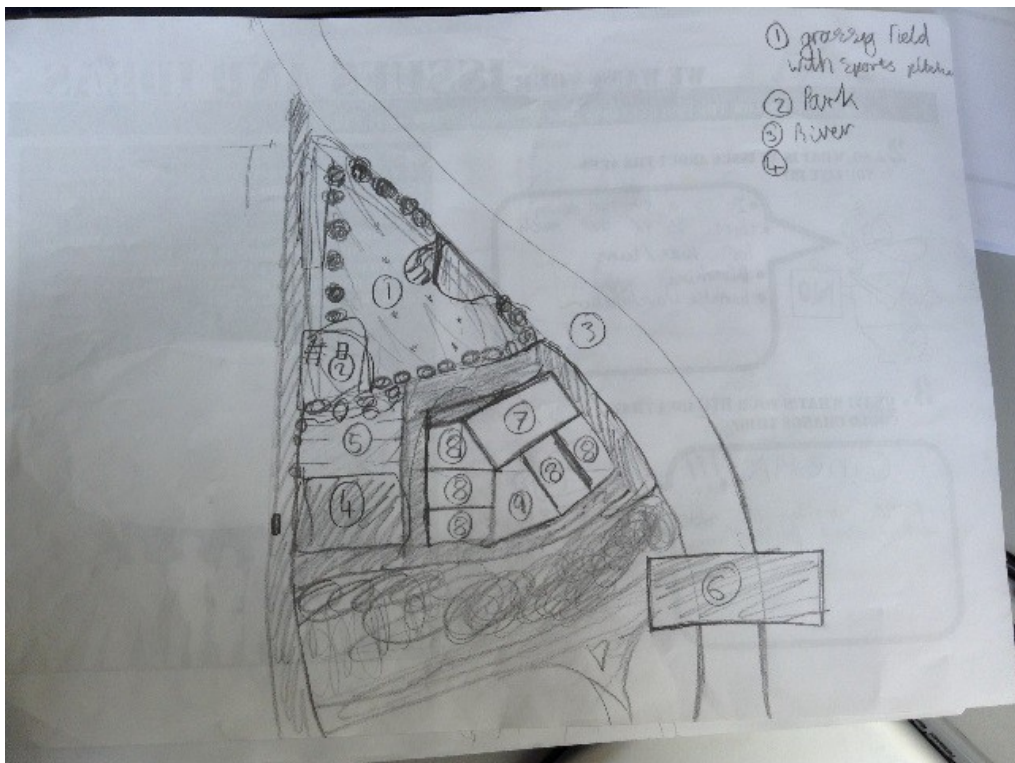


Fig. 48 Master Plan of Phoenix Estate Group 2 (K. Duggan)

Whilst both of the group's Master Plans contained parks, grassy areas for sport, road systems and shops, Group 1 (which completed the characterisation activity) had included communal seating areas, forests, wind turbines, and allotments. It is uncertain as to whether these additional ideas were down to characterisation, but the data and observations from that day would suggest that ideas such as many seating areas and allotments have come directly from certain participants taking part in the characterisation process.

Using the apps:

The participants enjoyed using the iPad minis, and needed little guidance in how to follow the process of producing an animated character. The chance to put on a voice and add movement and facial expressions appears both amusing and fun for them. However, it appeared that the task of imagining yourself as another person was difficult. In this activity the characters were predefined, so the participants appeared to have difficulty in identifying with them and as a result might not have thought about the deeper issues.

Minecraft:

The majority of the participants found using Minecraft fun, engaging, easy, creative and useful for explaining ideas. They enjoyed using it and spent hours concentrating on what they were doing, completely engaged on the task they had decided to carry out. They also went home after the sessions and logged on remotely to continue working on their creations, so in terms of a tool to engage, it works. The question is thus about how the process and activities within it can be created to produce useable outputs. Overall it was clear that a more refined process should be followed, not to lead but to educate the participants as they carry out the building/rebuilding of their village/town. As opposed to having them carry out the 'character's point of view' activity before the build, it may be useful to do this during the build, in some way. Or build in a consequence to the actions they are carrying out. It would also help to include specific tasks that deal with the different categories (transport, health, leisure etc.) within the game which might encourage the participants to consider alternative issues and inspire deeper ideas, while maintaining a level of enjoyment of playing on Minecraft, plus keeping them focused and engaged as they continually have challenges to complete.

Observations and insights

Focus

- When given a role or job of making something in Minecraft the participants really focused. It appeared that the participants would work un-distracted on their creations as long as they had something purposeful to do. If not, they started to become distracted using the novelty features of Minecraft (spawning animals, attacking villagers etc.), which suggests that while the aim of this workshop was to be quite open and let the ideas of the participants come through with as little leading as possible, a greater focus and purpose needs to be fostered by the facilitators to keep the participants concentrating.

Accuracy

- The participants spent a lot of time trying to make their creations look as realistic as possible, especially when it was a structure they were familiar with. This happened with the cinema, the fire station and the shops, where a great deal of time was spent recreating seating, lighting, fixtures and fittings. Bearing in mind that Minecraft is limited to building with 'blocks' and pre-defined fittings, the participants were creative in the way they created their representations.

Communication

- Minecraft contains within it a text based messenger system, through which the participants commented upon each other's creations, posed questions and at times wrote mild abuse to each other.

Deliberation

- At one point a participant proposed building a power station and another participant questioned why he was building that, what was the purpose? This indicated that they were starting to care about and invest in what was being placed in the site, what was being built there, what space it would take up and how it would affect the other ideas around it.
- At one point the discussion of housing arose with one participant citing an objection to adding it in; 'we're kids, we don't need housing'. This participant had been part of Group 1 (characters ideas) yet despite having gone through this process of thinking as a different person, the participant seemed to continually think about what they

wanted and held little consideration over what other residents would potentially think of their ideas or how they would be affected by their ideas.

Comment

Within the open world of Minecraft, the participants were free to 'walk' around the virtual Phoenix Estate and view what the other participants had been building. In one case a participant came across the skate park built by someone else and made a judgement that it could be improved, rebuilding it with a larger track to emulate how the equipment would be used in 'real life'. This demonstrates the benefits of using Minecraft to see how the site was developing in real time, where comments, judgements and suggestions can be made either through the programme (on screen messenger system) and verbally.

Feedback

The majority of participants stated that working in Minecraft was the activity they enjoyed the most during the workshop, due to its 'creative' potential and because it allowed them to externalise their ideas. The least enjoyable activity was 'mapping out Lewes', where they had to use Google Earth and online photographs to recreate Lewes in Minecraft, this was referred to as 'boring' as they 'couldn't use our imaginations, so it became quite dull'.

Q. Do you think Minecraft is a better tool for designing the Phoenix Estate than using pens and paper? Please explain your answer

Yes because you can show materials used

Yes, because you can show your ideas more clearly

Yes because it feels like you are really making it

No, because you can draw curves and be more elaborate with pens and paper.

Q. Do you think Minecraft is a better tool for designing the Phoenix Estate than using physical modelling materials? Please explain your answer

Yes, because Minecraft is more accurate

Yes, because Minecraft is easier and neater

Yes, because we didn't

No, because you can see what it would look like

Q. Did your design ideas change after completing the Ideas and Issues process as a different character? Please explain your answer

Yes, it made me think about what everybody else liked
Yes, because my ideas weren't similar to my character's

Limitations

Many of the participants present at this workshop were not actually from Lewes and therefore may have had less of a connection/interest in the potential changes occurring there.

- Future workshops will be carried out with participants discussing their own village.

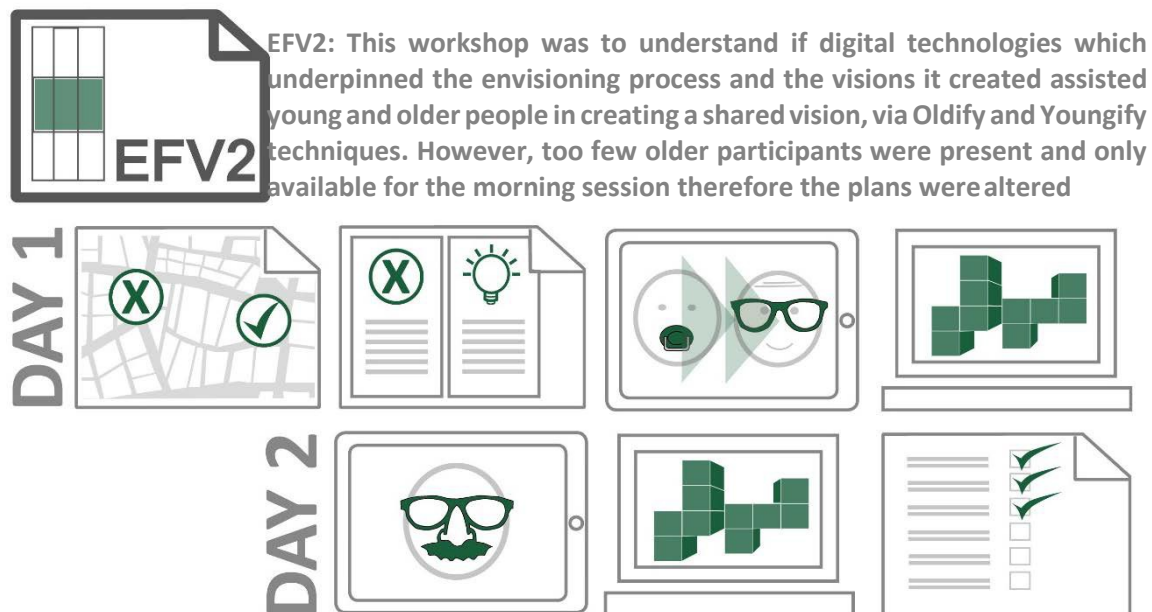
When using the 'simulated app', participants knew that as soon as they completed the activity they could join their friends who were already playing on Minecraft, which may have caused them to appear slightly distracted and keen to complete this initial activity as quickly as possible, in fear of missing out on what was happening in the Minecraft room.

- Future workshops will not include the Minecraft activity, and the 'simulated app' will be used as a stand-alone tool, with the purpose of obtaining views and ideas from young people about their community.

The age of the participants may have been the reason it was difficult to imagine themselves as an older person, or an adult in a very different situation than themselves.

- Future workshops will use the same methods and process as carried out in this workshop, and note any differences in the outcomes.

5.3 Workshop 3 Valley Gardens Session 1



Design Brief: To address RQ3 Can the co-design and use of a digital envisioning process support more inclusive and communicable visions of community members?

Although not a Neighbourhood Plan, the Valley Gardens project was a real life envisioning process through which Brighton and Hove City Council were seeking to engage more people in the re-design of the Valley Gardens area of Brighton.

Working on this project presented the opportunity to re-design the envisioning process (in terms of the tools and methods used) as referred to in EFV2. This was a more refined structured process than was undertaken in the previous two workshops, with alterations made to the Treasure and Trash, Ideas and Issues and the use of Minecraft.

Day one saw the participants carry out the re-designed Treasure and Trash activity, which now used categorised flags pinned onto a map mounted onto foam board. The participants then completed the Issues and ideas worksheets to collect their baseline ideas. This was followed by the Ageing Booth app, used in conjunction with Morfo to generate their idea, after which they were able to build these ideas in Minecraft.

On day two, the participants used the amended Characterisation images (in order to assess if they were more successful in prompting the young people than the previous images). Following this, the participants rebuilt their altered ideas in Minecraft and just before home time they presented and evaluated them.

Location: University of Brighton Grand Parade Design Hub , April 2015			
People Present	Identification	Role	
Kelly Duggan	KD	PhD Candidate, Project Designer, Researcher, Facilitator	
Joseph Palmer	JP	Block Builders Minecraft Facilitator	
Megan Leckie	ML	Block Builders Minecraft Facilitator	
Participant	Age	M/F	
G301	12	M	
G302	9	F	
G303	6	M	
G304	12	M	
G305	7	M	
G306	7	M	
G307	11	M	
G308	12	M	
G309	8	M	
G310	8	M	
G311	6	F	
G312	11	M	
G313	12	M	
G314	13	M	
G315	61-70	F	
G316	50-60	F	

Procedure

Activity 1: Treasure and Trash

The participants were split into three groups and carried out the Treasure and Trash activity. This was amended from the initial workshops approach of putting stickers on a map, and instead used categorised flags which encouraged participants to think about what the different issues or ideas were in different contexts.



Fig. 49 Image of redesign category flags, Duggan, K. (2015)

The categorised prompts appeared to assist the participants in identifying positive and negative points that moved beyond the ‘leisure’ ones identified in previous workshops. As identified in the table below, transport was the most common comment, followed by Environment and Building. This outcome may be due to the fact that although the majority of the young people knew the area, their experience was in most cases limited to driving through it and walking past it; the gardens themselves were not a location they ever visited as a destination in itself. This meant that when identifying the ‘treasure’ and ‘trash’ aspects of it, they had limited knowledge of what existed in the area, beyond what was visible from the road and pathways, and could explain why the most common trash point was related to transport issues. This limited knowledge of the area appears to be influencing what they believed to be the good and bad points and in turn what their ideas grew to be.

Waste	Building	Environment	Leisure	Transport	Health	Business
Trash: because its trash	The memorial: it's always full of seagulls	Pollution: From cars, traffic, noise, people smoking	General: There is not a lot to do	Traffic: there is too much noise and overall busyness	Deadly Gulls: they dive bomb you and give you a nasty nibble	Buildings: there are a lot of deserted buildings
Rubbish: there are no bins	The Mazda Fountain: smells of dead things	Animals: There are no animals to look after		Traffic: It's difficult to cross the road		
	Buildings: they are too old	Lighting: <i>It's too high, we need it lower down and solar powered</i>		Road: there needs to be more crossings		
	Monument: <i>It's ugly and unkempt</i>	Traffic Pollution: <i>it's bad for health</i>		Traffic: Cars rule the space, not the people. It's dangerous		
				Cycle Path: <i>It winds too much crossing footpaths</i>		

Table 6. Elements identified as trash in Valley Gardens by the participants

Treasure

Waste	Building	Environment	Leisure	Transport	Health	Business
	Fountain: It was made by the person who made Mazda cars	Grass: its grass	The fountain: <i>comment Illegible</i>	Buses: <i>changed to trams</i>	Café: you can eat and drink to live	Phoenix centre: it can be used for lots of things
	Mazda Fountain: it's nice to look at when it is working	Water feature: to replace fountain				Grubs restaurant: it sells cheap delicious burgers that are organic
	Uni building: it's awesome	Green bits: you can walk dogs and see worms				

Table 7. Elements identified as treasure in Valley Gardens by the participants

Activity 2 Issues and Ideas Worksheet

The most common issue was once again the traffic (with 5 participants mentioning this), mirroring what was identified in the treasure and trash. However, the most popular ideas do not match this, with 3 participants suggesting 'more trees' and another 3 suggesting 'electric cars'. Of the electric car suggestions only one participant saw them as a way to alleviate traffic by adding a congestion charge for non-electric cars, the other 2 were more concerned about environment and pollution issues.

The Issues and Ideas sheet appeared to be a simple means of collecting opinions about what is most disliked in your area (if you selected a large enough sample group to ask) and then to think of a solution to address this. When used in succession with the Treasure and Trash activity, the issues become more diverse than when you simply ask someone 'What is your biggest issue with your town'. These issues then lead to solutions that are usually directly linked, meaning the big ideas are often more diverse than 'a skate park'.

Activity 3 Ageing Booth and Morfo

Despite being one of the most popular activities in previous workshops, two of the young people did not want to age themselves using the Ageing Booth app, but were much more comfortable (and just as happy) to act as camera operator for the other participants. Although there were 12 participants who had their faces aged, only 5 'aged' people videos were produced (or saved correctly). This was partly due to the fact they were working in groups and had to wait for their turn to use the iPad and that the process of thinking about what you would want as an older person and recording and animating it took longer than the time allocated, which will need to be addressed in future workshops.

Of the videos that were created there were reoccurring themes: places to sit and relax (whether a café or a park area), public transport to assist in moving around and also the idea that older people needed care and support of some sort. When compared to the original ideas of the participants, these were often in stark contrast, or simply an entirely different idea. For example, one participant who had suggested an outdoor theatre for buskers and young people to have a stage to perform on and seats for young groups to watch/hang out on changed their idea to somewhere with 'lots of peace and quiet', quite the opposite of an open air performance space. Having a place to sit and relax was also mentioned repeatedly along with more trees and nature areas to admire.

It is evident that the use of the Ageing Booth app with Morfo changed the ideas of many of the young people. It suggests that they understand that those of a different age group will want

different things to themselves in a shared space. Indeed, it would appear they can empathise with the needs of someone who is older (or at least they have a perceived idea of what an older person would want, whether an elderly person would agree or not is a different matter). What is not yet clear is whether the use of digital technology, and the ability to age their own face, is the reason for this or whether simply asking a young person to imagine being that age, without any digital technology supporting photo manipulation or animation, would have the same outcome. This will need to be clarified in the next workshop. The impact of introducing the iPads into the process was the buzz of interest and excitement it appeared to create in the room. Whilst doing the 'Treasure and Trash' and 'Issues and Ideas' activity (both using paper and pen based techniques) there was a lot encouragement and facilitation required. To have those activities completed the facilitators had to consistently ask questions of the participants, such as: "what area don't you like in Valley Gardens?" "Why don't you like this?" "What would you change so it was something you did like?" "Is there anything you think is missing in the gardens?" "what would make you visit valley gardens more regularly?" etc. and in many situations offering a series of examples to encourage the young people to consider different angles, whereas as soon as the iPads were available it was the young participants asking what they had to do to complete the activity (in order for them to have access to the iPad quicker). Is it the novelty of seeing themselves with jowls and wrinkles and having the ability to alter their voice that appears to assist them in becoming that character? Observations so far suggest that being able to recognise themselves, a much older grey-haired version of themselves, in which they resemble grandparents or other senior people in their lives, is significant to the success of the method. They are not animating a pre-defined character of an older individual who they have little connection with; it is themselves that they see and this appears to trigger a greater empathy of exactly how they might feel if they lived as an older person in their community, and what other older residents might feel about the area and changes that might occur.

There also appears to be a benefit in having the ability to do something that is interactive that engages them in completing a task they might not be eager to do otherwise. This may be due to the fact the act of writing things down (as opposed to speaking/filming) appears to be enough of a deterrent to not participate or contribute when given the option.

G304 Idea as self: *Create something interesting on both sides of the valley gardens (such as an outdoor theatre)*

G304 Idea as aged person: *Urm...something I would like to change about Valley*

Gardens if I was this age would be ... like.....well, I want lots of peace and quiet, because of all the cars and everything. So I would like there to be a nice park area with ... like... trees and park benches and places to sit so you could relax and stuff.

G308 idea as self: *A park with a café and a car park for cars and a new water feature.*

G308 idea as aged person: *I...I... don't think that...erm... park in Valley Gardens should be made as a café, I think it should be made into ...er... a care place for older people who need help.*

G311 Idea as self: *A café, more bushes and little trees*

G311 idea as aged person: *I really want apple trees*

G301 Idea as self: *Replace [fountain] with an outdoor theatre*

G301 idea as aged person: *I need my public transport and cake...mmmm... cake. I need cake and ... urm... public transport... and I need somewhere to sit with my friends and make [inaudible] ... anyway I need to go and get my bladder removed.*

The four examples above demonstrate the different level of seriousness and sensitivity the participants would respond with.

Activity 4: Minecraft

Once again Minecraft was the most popular activity amongst the young participants, for reasons such as “it was the most interactive” (G304, aged 12), “It’s a fun game” (G308, aged 12), “I love it!” (G305, aged 7) and “you got to play Minecraft” (G311, aged 6). Minecraft is an incredibly popular game, with all of the workshop attendees having previous experience playing it. The use of Minecraft within the sessions, it could be argued, was the factor which engaged young people to participate, more so than attracting young people with offers of the chance to be involved in a decision making process that could shape the development of the Valley Gardens area. It is a medium in which they appear to feel confident and comfortable in expressing their ideas, and one which they will sit and produce ideas for long stretches of time without becoming distracted. The designs built in Minecraft saw 4 of the young people return to their original idea that they stated before the ageing process, and 7 came up with brand new ideas that were neither (directly) related to the ageing process or to their original idea.

There was also one individual who merged parts of their original idea and a new element, and one individual who merged their original idea with their idea as an aged person. On the surface this would suggest that the ageing process had little effect on the creativity and ideas formed once the young people moved into externalising their ideas in Minecraft. However, this data is limited as 8 of the participants either did not want to be aged, or the videos were not saved correctly; in which case some of the ideas identified as ‘new’ may have been ones shaped by what they had conceived during the ‘ageing’ process. In further workshops clearer instructions

will have to be given on how to save these Morfo videos and the importance of saving them will be stressed. What the Minecraft creations demonstrated was the level that the young participants listened to each other throughout the process; at the end of each activity there was a discussion where the young people shared their ideas with each other, describing what their idea was and why and what they would build. These conversations appear to have had an effect on the Minecraft builds during day one, with several participants collaborating and working on one 'build' together, and other participants whose ideas were 'new' to them - but had been described and shared earlier in the day by a different participant. This suggests that the process may be useful in terms of collaboration (i.e. understanding each other's ideas more clearly and wanting to work on and develop them) and ideation, as they consider and adopt others suggestions, even if it is from another in their own demographic.

Day 2 Activity 5: Characterisation

On the second day of workshops there were only young people in attendance. The young people were first shown a series of iPads containing images of: a bike, the Mazda water fountain, Brighton MP Caroline Lucas and a Seagull (fig.50) followed by an explanation of the activity they would be doing and why, with an overview of how the Morfo App worked. The participants were then split into 4 groups, with each group being provided with an iPad that was pre-loaded with image prompts of people and things that could be found in Valley Gardens or the surrounding area, as shown below (fig.51).

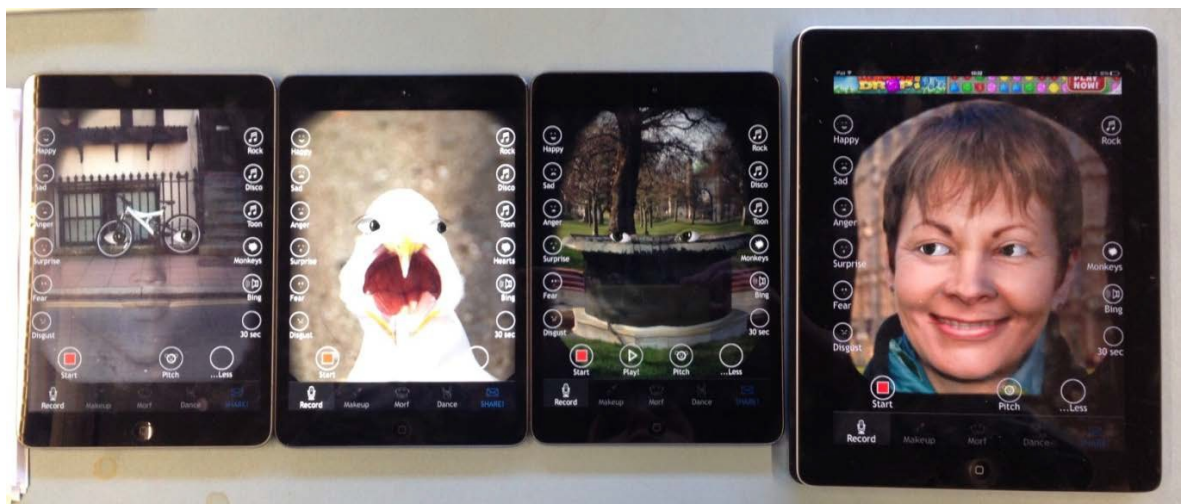


Fig. 50 Example of animated character prompt photographs (K. Duggan)



Fig. 51 Selection of character prompts stored in iPad

Selecting an animal character to describe an issue and idea for was the most popular, with 7 out of the 14 participants either selecting foxes, badgers, seagulls or dogs to empathise with.

Activity 6: Character build in Minecraft

The young people then built their character prompted ideas in Minecraft.



Fig. 52 Young people carrying out the Minecraft build (N. Gant)

Feedback

Minecraft was by far the most enjoyed activity (fig. 52).

According to the young peoples' feedback sheets, the Treasure and Trash activity was the least enjoyable, receiving comments such as 'it was boring' and 'it was tricky to find the places.'

Key points The initial plan intended for this workshop had to be altered due to lack of older participants in attendance. Therefore, what the data provided was a look at the process and what it produced in terms of how ideas generated differed due to the different activities carried out by the young people. What was observed was the notable enthusiasm and excitement witnessed in the young people when the tablets were brought out, and their keenness to use the technology often animated them in completing the task they were being asked to do. The outputs produced on Minecraft were not necessarily a 'vision' for what they believed Valley Gardens should look like, but a representation of what issues they believed to be important i.e. prison and cameras represents safety and security, cafes and gyms could represent their desire for leisure etc. The overarching question in this research is the value of digital tools and, despite the research so far utilising different digital tools and observations made, their value cannot be assessed without comparing them with non-digital approaches. Therefore, the next iteration of the workshop will split the participants into digital and non-digital groups in order to produce comparative data for each stage of the process. It will also aim to attract elder participants in order for the youngify activity to occur to assess its value in assisting deliberation between young and older people, in order to create a shared vision for the area.

Summary

Treasure and Trash

- Having the ability to take the young people out into the area being focused on may well be beneficial to completing the map based activity, or as a digital option (where leaving the workshop room is not an option) using Google Street Maps to carry out a virtual walkthrough of the area in order to become better acquainted with it (or rebuilding it in its current state, as was done in Workshop 2).
- Despite the workshop not following the original plan due to several unforeseen circumstances, the amended process and the data this provided offered useful insights that addressed both the research questions, and practical considerations that helped ensure a greater success in future workshops.

In regard to the use of technology, the engagement and enthusiasm levels were observed to increase quite dramatically during activities where digital technology was introduced. This is further supported in the 'most enjoyed' section in the young people's feedback forms. This could be regarded as being completely novel, and just because the young participants enjoyed using these methods the most, due to them being 'fun', does not necessarily mean that they

hold real value. Yet, the fact the young people were so keen to use them makes them massively valuable in terms of engagement. The young people displayed such a keen interest in completing the activities in order to have their turn on the technology, they were asking questions regarding what they had to do next, what question did they have to answer, just in order to use the iPads. They asked when they would be able to use Minecraft and what they had to do in order to be allowed to use Minecraft. This keenness can be seen as a double edged sword: on one hand the desire to bypass or hurry through certain processes could mean that they were not completing them sufficiently; on the other hand, the participants did engage in and complete (with varying levels of seriousness) each of the activities and appeared to take on this experience which ultimately came through in their Minecraft designs. This intense desire to use the technology, and become proactive about achieving that goal, sits in stark contrast to the initial paper based activities. Here, each facilitator had to continually pose questions to the participants and ask repeatedly what they were interested in, and what they would like and make suggestions in order for the participant to contribute to a treasure or trash pin, or fill in their ideas sheet. It was these tasks the participants found more difficult and less interesting.

This would suggest that in terms of engaging the participants to take part in the workshop, digital technologies are something they are repeatedly more drawn to and are a way to excite them about the project. Of course, sheer enjoyment is not enough if it does not facilitate the meaningful practices of reflection, ideation and externalisation and deliberation, but understanding how to utilise novel apps and gaming software as platforms on which participants are able to carry out meaningful work, whilst having fun, is a worthy outcome. For example, the young people who did carry out the 'ageing' process and create a video found the experiences highly amusing at first, yet soon began to think of quite serious and practical answers regarding how they would feel at that age. Having asked one participant what their original issue and idea was, then asking if he would feel the same aged 65 (as the image was showing him to be) he immediately responded, very seriously, rejecting his initial idea and suggesting an alternative - "no, I would want an old person's home or something".

The outputs produced in Minecraft on the end of the second day were 3 animal based structures focusing on making Valley Gardens a place for both animals and humans (namely for foxes and badgers), a police station with security cameras around the park, a house, two coffee shops, decorative landscaped area with flowers and herb gardens to be harvested by the local people, and an outdoor gym. Outputs produced at the end of the first day following the ageing activity included an outdoor theatre for buskers, improved decorative landscaping,

cafes with outdoor seating areas, sports court, congestion charges, more parking, and a house. The question is, does this constitute as a vision? I would argue that these specific objects are not what the young people absolutely believe should be in Valley Gardens, but **highlights the issues they consider to be important**; Prison and security cameras could represent safety issues; cafes and gyms could both represent activities and leisure, a means of attracting people to use the area, the desire to improve the aesthetics of the gardens themselves in order to draw people in. The outdoor theatre sought to address the issue of attracting residents to use the gardens, expressing a desire for some sort of entertainment to exist there, whilst offering a specific location for the existing buskers of Brighton.

In terms of RQ2 whether the use of digital tools and prompts facilitate creativity, the outputs would suggest that the use of Morfo and Ageing Booth did appear to generate diverse ideas and stimulate and encourage the participants to consider, and be inspired by the perceived needs of people other than themselves. For example, the original ideas produced by the young people did not contain any consideration towards how animals might use and co-exist in valley gardens, or be affected by any development in the gardens; following the characterisation activity, half of the group focused their ideas around wildlife needs. This may initially have been due to the novelty of animating a seagull's face for example, yet it led to considered thoughtful designs surrounding how animals and humans could exist together in the area.

There were of course ideas such as 'houses' which were created by the youngest participants of the group and may not appear to have had much thought behind them, further than the desire to build something which 'looks impressive' and recreated something that was present in their real world environments (i.e. the house with bedrooms and beds), which could be considered as one of the limitations of using Minecraft. The larger question however, stands around whether it was the fact the activity was digitally supported that led to the diverse ideas, or was it merely the prompts. Did the digitalisation offer something more than existing methods in eliciting imagination and ideas, and facilitate the transformation of individual ideas into collaborative ones? The data collected from this workshop produced **no direct comparative data with non-digital techniques that demonstrates this clearly**. There has been a great deal of research into the role of prompts (via role-play, or scenario cards) that demonstrate they can assist participants in thinking of alternative solutions, but to understand whether specific apps and technologies afford anything more than these more traditional paper based approaches still needs addressing. This will be addressed in the following workshops, whereby participants will be divided into the digital and non-digital groups, carrying out the same tasks in order to gather more rigorous comparative data.

Discovering the balance between what is novel and what is novel *and* useful has been an ongoing task during this project and was highlighted again in this workshop when young people were using both Minecraft and the Morfo app. When the young participants first begin the Minecraft session they are silent and engaged and all that can be heard is the furious clicking of ‘mouse’ control pads, but after they have completed the project they were working on they appeared to become distracted and started to fool around. This could be due to the fact that the Valley Garden workshop contained many young people who had worked with the other facilitators (Megan and Joe of Block Builders) previously (some on several occasions), and were therefore perhaps over familiar and inclined to mess around more than they would if it was their first session. It may also be that too much time has been allocated to certain activities, causing boredom and distraction, in which case shorter activity times will be tried out in future workshops.

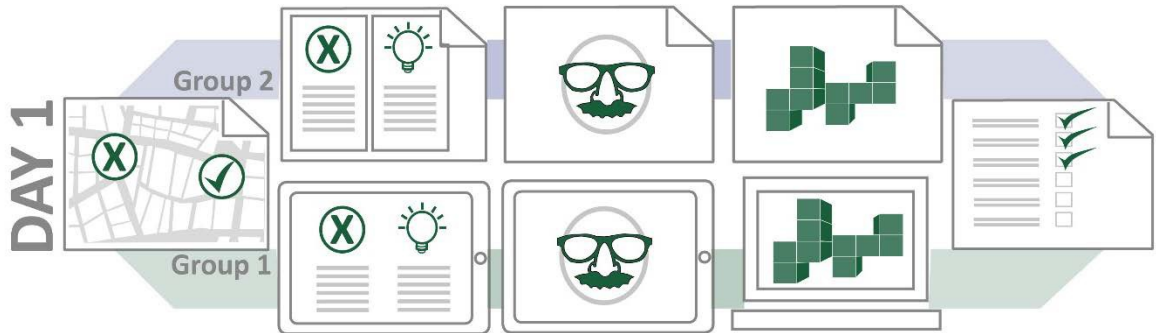
Overall this workshop highlighted the potential of using Ageing Booth, Morfo and Minecraft (digital technologies), in stimulating and eliciting empathic projection, that facilitates imagination and in turn creativity, when thinking of future visions for the future and a certain geographic location, and supporting participants in forming these ideas collaboratively. Yet the data gathered from this workshop has notable limitations regarding how these digital technologies compare directly with non-digital counterparts, and in how the outputs created can be used by the decision makers in creating a vision; these remaining questions will be addressed in the following section.

There was a notable reluctance to fill in worksheets, maybe due to the fact it feels too much like schoolwork, or certain individuals are restricted by their writing or reading abilities, whereas the creation of videos and recorded audio could be argued to be more inclusive when working with young people. This unwillingness to carry out written work was also noted on several feedback forms following the workshop, where several responses were altered from ‘yes’ to ‘no’ once the young person realised that the ‘yes’ answer required further clarification and more written explanation. Suggesting that the activity of writing itself was restrictive in terms of understanding their views.

5.4 Workshop 4: Valley Gardens Session 2, Day 1



EFV3: This workshop was to address questions surrounding how digital tools compared to their non-digital counterparts. As such the participants were split in digital and non-digital groups, carrying out the same process but via different means in order to generate comparative data.



Design Brief: This workshop sought to address RQ 1 and RQ 2, but mainly RQ 3, regarding whether the co-design and use of a digital envisioning process can support more inclusive and communicable visions of different community members beyond the young.

The second Valley Gardens Workshop aim was to engage and include young and old participants in creating a shared vision for the redevelopment of the Valley Gardens area of Brighton. Once again, both digital and more traditional paper based methods were employed in order to support participants in undertaking an envisioning process, consisting of reflection, ideation, externalisation, deliberation and evaluation.

However, several alterations were made from the previous iteration of this workshop following the lessons learnt and limitations identified; it focused far more strictly in separating participants to engage in digital or non- digital activities in order to gain comparable data. It concentrated more (at the request of Brighton and Hove City Council) on their proposed plans for the area (as opposed to the existing plans), gaining people's opinions of these and their thoughts regarding what activities they believed the new garden areas could facilitate and how they could be developed creating an all- together more reactionary setting.

To attract more attendees over the age of 55 leaflets (appendix G) were again posted to local residential properties, posters and leaflets were left at local doctor's surgeries for them to display and with local community centres. Leaflets were displayed at Jubilee Library in Brighton and Pdf versions were emailed to The Cupp Network, Greencycle Sussex, Freegle, Connected Communities, and posted on several Facebook group pages which are local to Brighton, as well as maintaining the original conversation on the Street Life website.

Different data collection methods were employed; namely the use of cameras and audio recording to observe the participants during the task, to understand what extent the activities being undertaken were facilitating creativity (lateral thinking and empathy).

People present	Identification	Role	
Kelly Duggan	KD	PhD candidate, project designer, researcher, facilitator	
Joe Palmer	JP	Blockbuilders, Minecraft facilitator	
Megan Leckie	ML	Blockbuilders, Minecraft facilitator	
Day 1			
Participants	Age	M/F	Group
G401	9	M	1 – Digital
G402	8	M	1 – Digital
G403	14	M	1 – Digital
G404	10	F	1 – Digital
G405	13	F	1 – Digital
G406	9	M	1 – Digital
G407	13	M	1 – Digital
G408	12	M	2 – Non Digital
G409	10	M	2 – Non Digital
G410	12	F	2 – Non Digital
G411	10	M	2 – Non Digital
G412	12	F	2 – Non Digital
G413	11	F	2 – Non Digital
Day 2 (Day 1 participants plus ...)			
G420	55+	F	
G421	55+	M	
G422	55+	F	
G423	55+	F	
G424	55+	F	

Procedure

Activity 1 Treasure and Trash

The participants were divided into two groups and once again used the categorised flag prompts and asked to reflect on the Valley Garden area (fig.53) but with the addition of the prompt sheets (fig.54), to encourage the consideration of a range of categories.



Fig. 53 Treasure and Trash board post activity (K. Duggan)

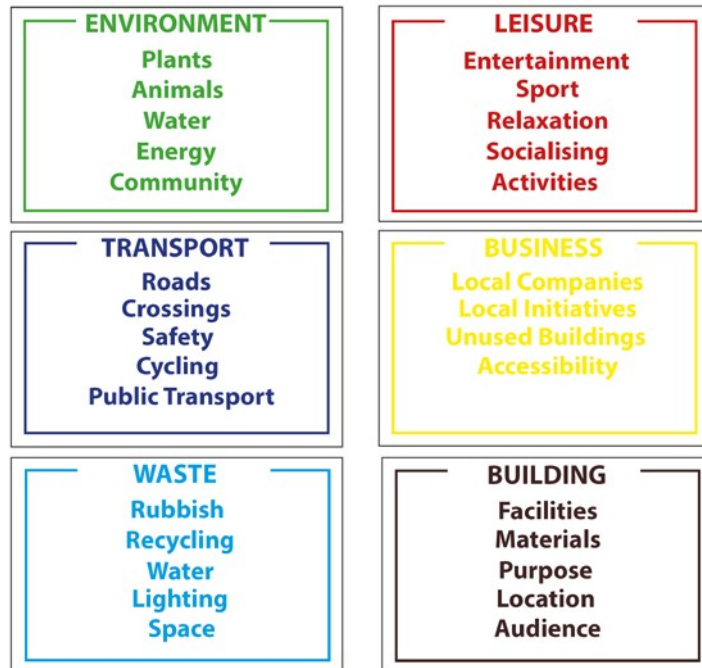


Fig. 54 Prompt sheets given to each group to open up discussions, Duggan, K. (2015)

Activity 2 Issues and Ideas and Minecraft build

Group 1 (the digital group) were given the option of recording their issue and ideas using a dictaphone (instead of writing them out on a worksheet). The results of this activity can be found in the table below.

Grp.	Part.	Issue	Idea
1	G401	No toilets, I need them	Put in toilets
	G402	Rubbish	Mario Character to attract children
	G403	Grey Squirrels	Red Squirrels
	G404	Bins, because the rubbish is going everywhere because of the seagulls	More bins
	G405	The grass	A way to make the grass healthier
	G406	<i>"My issue is there are too many buses and it is getting really crowded around the roads"</i>	<i>"So my solution is to try and make a tunnel underground through the park and have underground bus stations and you could go into the park and go into a bus station and go underground and catch the bus – that's my solution."</i>
	G407	<i>"I'm just thinking of one.... coz I've got, it's not like I've got a thing against the church... but it'll drive other ethnic groups away... So that's be worse – but it's already being built isn't it"</i>	<i>"... you just have to not make it all a big church, you have to make it neutral and make it nice for everyone"</i>
2	G408	Littering	More bins
	G409	Too much litter and pollution	More bins and less buses, recycling the materials from buses for more useful things
	G410	Flowers	More flowers
	G411	That the green looks too plain	Free school where you can learn to code/use PC
	G412	There are not enough areas to relax	To have more places to just enjoy, like benches, cafes, etc.
	G413	Too many seagulls	To build a bird place for smaller birds

Table 8. The unprompted issues and ideas from participants

Only two members (G406 and G407) of the digital group wished to voice record their ideas and issues, as opposed to writing their ideas out on the sheets. As can be seen from the table above the quantity of words spoken (noted in *Italic*) was significantly higher than the words written to describe the young person's issue and idea. There is an increased level of detail, as the worksheets only contained a summary (often consisting of 4-5 words) of what the participants had been saying during the group discussion of their issues and ideas. The young people who recorded their views also wanted reassurance that only I would be listening to them, and that they would not be made available for other people to hear, before they completed the task. To carry out the recording they went off into a corner of the room where they were inaudible to the rest of the group and in the two examples gained, there was a notable difference in the seriousness of the ideas they shared on the recording device to those which they shared whilst in a group. For example, when participant G407 was originally asked about his idea during the table discussion it was to "blow the church (St Peters) up with TNT", whereas when he was speaking alone it was more about making the area around the church more neutral and welcoming for all religious and non-religious groups; arguably demonstrating a real maturity and sensitivity. Participant G407 may have written the same response if using the worksheet, but the anonymity of the recorded approach, as opposed to someone being able to look over and read his sheet whilst he sat amongst the group, appeared to support him concentrate less on saying comments to amuse the rest of the group and provide a thoughtful answer.

The level of detail on the worksheets did not reflect the depth of reasons and explanations that had been discussed by both groups around the table. Whether the instruction to have one 'issue' and one 'idea' written out in such a structured format, within a set size box, restricted what was written, or simply the idea of writing was seen as an almost school-like task is unclear. Results from the feedback sheets would suggest that having to write, for many but not all of the participants, was not an enjoyable task and one they tried to avoid or do as little as possible for, which may explain the limited textual data. What the use of the categorised flags appears to have done is increased the variety of the initial ideas. In earlier workshops the participants had repeatedly suggested more shops, more parks, more leisure activities, yet this group had considered changes that would address existing problems (beyond that of entertainment) such as the practical idea of building toilets and adding bins to address littering problems.

The two groups then sat down at the laptops and were asked to build their ideas within the Minecraft representation of Valley Gardens (pre-built by the Block Builders team). The

conversations during the build were more difficult to carry out as the participants were consumed with Minecraft and too distracted to answer questions, demonstrating how 'in the zone' the participants are when using this software. There were long pauses and sentences that drifted off and were not complete, which had an impact on the quality of the transcripts. The presentations at the end were more successful with almost all participants keen to stand up and present their idea to the rest of the group, as was demonstrated when JP asked "okay is there any brave volunteers that would like to go first? *almost all hands shot up* wow, look at that, everyone wants to go first" (fig. 55). The participants appear to demonstrate a high level of pride in the work they complete on Minecraft and are often eager to share and speak about the ideas and structures created within the program.



Fig. 55 Eagerness of participants to present their creations (K. Duggan)

Activity 2 Characterisation and Minecraft build

Group 2 were provided with a variety of images (as shown in fig 51), printed out on A4 paper format and laid out on a table. Facilitated by myself, Group 2 gathered around the table and were asked to select one (or more if they wished) of the images and write down what their issue and idea would be if they were that character.

Group 1 was led by facilitator ML, and the participants were provided with tablets which were pre-loaded with the same set of images in a digital format, and asked to answer to same questions by animating their image using the Morfo App. The table below provides an overview of what the participants built in each phase of the process.

Part.	Built in Minecraft (own idea)	Built in Minecraft (characterised idea)	Idea after ageing activity (day 2)
G401	Toilet block To address the issue of there being no open toilets here	Character: Fox Built an animal sanctuary. Elicited by the initial concern for urban foxes struggling to find food, this idea developed into a sanctuary for all animals to bring them into the park.	Need to create lots of seating areas for relaxation
G402	Mario statue To act as a meeting place for all the young people	Character: Bus Dismantled the statue The participant felt that the statue would distract bus drivers and other vehicle drivers and therefore felt it was best to remove it.	This issue was that there wasn't a cafe and the idea was that there should be more disabled ramps
G403	Red squirrel sanctuary To address the fact that there are only grey squirrels in the area and red squirrels are endangered	Character: Football Built a multipurpose astro turf The football's issue was that it got too muddy whilst being kicked around, this led to the idea of astro turf football pitch, which developed into the multi-sport pitch.	The issue was that coffee is a laxative and old people need less, so the idea was to build more organic cafes
G404	Fountains and benches and bins Original idea was to build bins so that the seagulls couldn't eat the rubbish and move it everywhere	Character: Dog Built a dog park The dogs issue was that there wasn't enough things for it to do, so a park was built with activities for dogs. Including bins to put dog waste in.	It was too noisy
G405	New pathway The earth pathways that people use to cut across the area of land were often muddy and unusable, the initial idea had been to replace the grass and make it healthier, but this changed during the build and was replaced by a stone path instead - to make it more accessible in all weathers	Character: Fox Built a fox sanctuary Built for the foxes so that they had a safe place to go to, and open for humans to see them.	The issue was that there were not enough tea rooms and more tea rooms should be made
G406	Bus tunnel To address the issue of traffic jams on the roads either side of the gardens. The tunnel would be a private lane for busses to alleviate the congestion	Character: Baby Built a playground The baby's issue was that there were not enough facilities in the gardens for small babies, so a playground was built with suitable size swings and slides	Issue was that as an older person they couldn't use computers so the idea was to have young people teach older people how to use them
G407	Planting and water features This was in response to the issue of the church, G407 wanted to create a space that was inclusive and attractive to all people	Character: Hipster Built a Sushi Bar The hipsters issue was that he didn't like things that were mainstream, and needed somewhere to go. It started with a coffee bar, but then changed into a sushi bar	There wasn't enough tea rooms, so the idea was to build a tea room

Non Digital Group (until the Ageing activity)

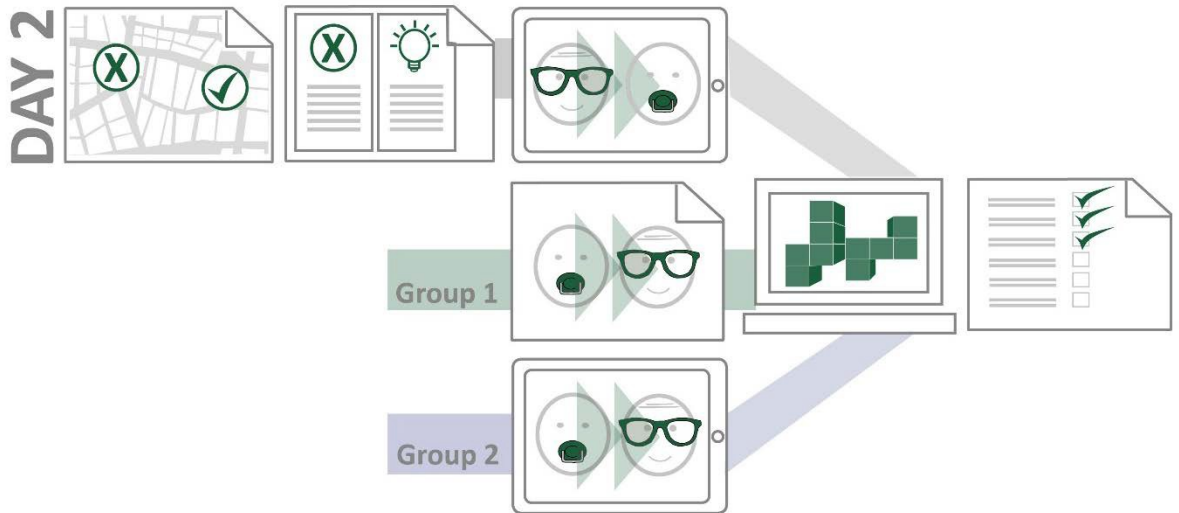
Part.	Built in Minecraft (own idea)	Built in Minecraft (characterised idea)	Idea after ageing activity (day 2)
G408	Bins In response to the issue of littering	Character: Cyclist Built a skate park Initially the idea was to build more cycle paths throughout the park so the cyclists didn't have to go on the road - this idea changed whilst building and the participant decided to be a skater instead and build a skate park	- not found
G409	A bus and additional bins This was in response to littering and pollution, with the idea to recycle buses into bins.	Character: Commuter Built a bridge over traffic The commuters issue was the traffic, almost running people over due to lack of crossings and not being able to open their window due to pollution. The original idea was to have more traffic lights and crossings and fences all around the gardens to keep the animals and children in, however this changed during the build stage into a bridge that went over the traffic that drivers could go over.	"Hey you, I am an old old man and I would like some flowers and a little tree and some more trees and a little, like, fountain"
G410	Flower beds To make the gardens look more attractive	Character: Fountain (Mazda) Built flower beds, lights and seats around existing fountain The fountain character wanted people to notice it so it was decorated and surrounded by lights and seats so people can appreciate it.	"I think it would be really nice to have a park, for someone like me to sit, for people like me to watch my grandchildren play"
G411	School for young people to learn how to code This was in response to the gardens looking to plain and there not being much to do	Character: Seagull Built a vets The participant thought the seagull image provided looked as though it had a broken jaw, therefore built a vets to help this seagull and other animals	- error in Morfo
G412	Cafe with benches In response to there not being enough places to sit and relax	Character: Fox Built fox dens The foxes' issue was that they didn't want to raid bins and needed somewhere to make their dens. Therefore the participant built dens where you could buy fox food and feed them, but was a safe space that humans couldn't enter	"Erm, I would like more places to sit and feed the birds...and stuff like that"
G413	Aviary for small birds In response to the number and size of the seagulls, this was a space which only small birds could enter	Character: Young person/ Hipster Built a graffiti park To create a space where young people could go and graffiti so that they didn't vandalise other buildings. It also had seats and acted as a place to hang out	"I would want a nice old people home and hospitals for old people. but I also want a little park to erm, sit down and read the newspaper"

Table 9. The ideas provided by participants following ideation activities

5.5 Valley Gardens session 2: Day 2



EFV3: Day 2 saw the attendance of the over 55's who followed the process of Treasure and Trash, Issue and Ideas and then Youngify (with the help of the young participants) eventually coming together to work on Minecraft to create a collaborative idea.



Treasure and Trash and Ideas and Issues (older group)

The same categorised flag activity was carried out with the over 55s group and there were notable differences from how the younger people had approached it. The older group required further clarification and instruction, and despite it being an activity which the young groups completed in 15 minutes, the older group were still trying to orientate themselves on the maps and label road names 27 minutes into the activity and finally completely the activities after over an hour.

The older group were all aware of the prior proposals produced by Brighton and Hove City Council for the Valley Gardens, and four of the participants were there mainly to discuss and object to these new proposals which contained plans for a single lane road running alongside the gardens, set to replace the existing double road. Despite the posters, leaflets and social media campaigns to attract community members who might not already be very active in public discussions, three of attendees recognised each other and referred to themselves as 'the usual faces' at this sort of event. Participant G424 also runs several community pages on social media that actively shares information about developments, plans and news in the area, and all had very strong (negative) opinions about the labour administration that was in office at the time of this workshop, creating a rather confrontational atmosphere from the start.

The older participants completed the activities, and their verbatim outputs are shown in the table below (underlined and capitalised, as per the participant's form):

	<u>Issue</u>	<u>Idea</u>	<u>Youngified idea</u>
G420	Traffic flow	Keeping bus and bike lanes away from motor vehicles. To keep all the cycle lanes over on the west side of Victoria gardens etc. away from the motor vehicles on the east. This is far healthier for cyclists and safer. It also creates a better delineation of road and cycle space. Why is there a large cycle lane alongside traffic on the east side?	n/a
G421	Lack of safety in central areas at night Keeping the area useful – attracting people to the area	Better lighting. Buskers corner. Speakers (like the dyke road open theatre). To develop a speaker's/musicians corner in Victoria gardens, protected by a wall of trees or bushes. Plenty of lighting to make space safer.	" I think what would be really important would be a buskers corner, or a speakers' corner so that what you're doing is having a small area – because we've got loads of great buskers in Brighton – and if they had a place where they could come and perform for an hour and give each other an opportunity to play and perform it would keep people in the area, so instead of just walking through the area, people would just stop and listen."
G422	Traffic Flow	Join up planting groups to manage garden area	n/a
G423	Single lane traffic is <u>RIDICULOUS</u> : congestion will increase and make air pollution far worse and gridlock if anyone breaks down!	Lots of trees/plants to attract wildlife (birds and invertebrates) to add interest <u>as you walk through</u> – because air pollution means it's entirely unsuitable to sit in (except one bench for the elderly/disabled) Older people only (idea) START AGAIN WITH PROPER , WIDER CONSULTATION AND NO MISLEADING PHOTOS	"I want to see lots of flowers and trees and my grownups say it's not a great place to sit because it's full of traffic fumes – but when we walk through there I'd like to see butterflies and bees and have trees there to protect us from the noise as much as possible."
G424	Retaining the Mazda Fountain and restoring it to fully working order	Scrap it! [the development] To leave gardens and roads as they are. Gardens should have fencing replaced. Scrap the scheme and start again, behave ethically and give the £18 million back.	"I'm 17, and my big issue and my big idea here is to keep the Mazda electric fountain to restore it, to get the water working perfectly and to get really bright lights in it"

Table 10. Issues, ideas and 'youngerfied' ideas of older participants

Youngify Activity

Three out of the five older participants had brought with them a photograph of when they were younger, so they were able to 'youngify' themselves using Morfo, which three of the

younger participants assisted them with. The transcripts of the animations created can be found in the last column of Table 11. Despite finding Morfo novel and 'fun' (G424), the older people did not respond to the app in the same way as the younger participants. They seemed unable to suspend disbelief and put themselves back into the frame of mind of a much younger person. This may have been because they were slightly distrustful of the situation, repeatedly addressing me as though I worked for Brighton and Hove City Council and was someone to be wary of. They seemed guarded about opening up to any ideas that could be interpreted in any way as support for the existing proposal, and demanded that although I had their permission to use the recordings in my thesis, I was not able to use any images or quotes of them in any publication that suggested they had participated in any form of consultation that supported the council's proposal.

The responses of both participants G423 and G424 appear to support this, when they state:

G423: *I want to see lots of flowers and trees **and my grownups say it's not a great place to sit because it's full of traffic fumes** – but when we walk through there I'd like to see butterflies and bees and have trees there to protect us from the noise as much as possible.*

G424: *I'm 17, and my big issue and my big idea here is to keep the Mazda electric fountain to restore it, to get the water working perfectly and to get really bright lights in it*

These views are exactly the same as their original issues and ideas, demonstrating that the use of reanimating an image of your younger self had no effect on reframing, or altering their perspective of these participants in any way.

The older participants were then invited to join the young participants who were working on their collaborative visions in Minecraft. The young people explained what they were building and why and the older participants were asked to comment, add suggestions or challenge what the young people had created. Some participants found this difficult, commenting in the feedback that:

G420: *the young persons here were not using the app in a constructive or controlled manner. There was too much random work. Little thought. No...The young people were working too fast and using the app like a computer game. There are too many random ideas that get discarded too quickly. No consideration thought or evaluation.*

G421: *watched the kids - No idea development, not more useful, just a game*

Whereas others were more positive about the use of Minecraft

G423: *it is their world and they are so confident with technology... they were not constrained by the things I thought of*

G424: *Not sure, I think maybe yes [it's useful]... can be built upon and changed easily*

When asked if working with the younger participants had changed their perspectives about what could be developed in Valley Gardens, two stated that it hadn't, one wasn't sure and two said yes it had.

Collectively building in Minecraft

Whilst the older participants carried out their Treasure and Trash and Ideas and Issues activities, the young participants carried out their Ageing activity, with group 2 using Ageing Booth and Morfo and group 1 just using their imagination (the results of which can be found in the last column of Table 10).

Having completed the ageing activity, the two groups were then asked to work in their groups to create their vision of Valley Gardens, from the point of view of their aged selves. The results of what was created are detailed in the table below:

Group 1 - Collective idea in Minecraft	Group 2- Collective idea in Minecraft
<p>Group 1 created a tea room for elderly people, which would have disabled access to it. The room was filled with tables that each contained cake on top of them. It included a computer room where the young people could teach the older people how to use them. It was equipped with a kitchen so the space could act as a community centre and host events. The building was also equipped with inverted daylight sensors so the lights would only come on when it was dark, to save energy.</p>	<p>Group 2 all shared the idea that elderly people would want places to sit and relax, and be able to see their grandchildren playing in the playground, so they built a playground with a cafe next to it, with seating around it and a fountain surrounded by trees and benches. They also built a giant chess board where the pieces would be Minecraft pieces, to attract both young people and older people. There was also a pathway leading to a garden area with flowers and to the existing Mazda fountain, which was lit up.</p>

Table 11. Collective ideas to build on Minecraft (by the two groups of participants)



Fig. 56 Group 1 and 2 presenting their vision collectively (K. Duggan)

Images from Workshop



Fig. 57 Example of green roof design in Minecraft



Fig. 58 Example of light being used in Minecraft designs by Groups 1 and 2



Fig. 59 Participants sharing 'aged' faces with each other

5.6 Observations and insights

Creativity

- Using the categorised cards in the initial Treasure and Trash activity appears to stimulate far more diverse initial ideas as a starting point.
- The prompts (characterisation and ageing) both appear to stimulate a different frame through which the participant approaches the problem and, in turn, the solution. This worked for both digital and non-digital methods. Although the digital Ageing Booth approach did appear to be more immediate and require less facilitation.
- The ideas changed during the building activity with Minecraft: Having recorded their idea through Morfo during the characterisation activity, G403, whose initial idea was an astro turf football pitch, developed a design that incorporated a tennis court, a football pitch and a netball court. This was afforded by the software itself, where in Minecraft, you are able to suspend 'blocks' above ground, meaning that different elements such as a goal post and tennis net could hover over the pitch when not in use, which might not have been considered if using another medium.
- The youngify activity appeared to have little impact on the imagination of the older participants, who stated the exact same concerns and ideas as they did as themselves, however, they did enjoy the process and appreciated the novelty of the activity wanting to share it with friends and family.

Communication

- The participants were very proud of sharing their ideas in Minecraft, and felt that what they produced was of a professional looking quality.
- The young participants were actively interested in knowing how the Minecraft structures were created and often complimented each other of the virtual materials selected to represent their 'real world' counterparts. They understood the typology of the Minecraft world.
- Half of the older participants saw the potential of using Minecraft as a communication tool, particularly when they were able to see existing structures which they could identify from the physical world.
- The participants were very focused on the details they could create in Minecraft, and strived to make their buildings look as realistic as possible. For example, Minecraft has

a night-time mode which was useful in enabling the participants to identify where they would use lights (as a safety and security measure) (fig.58)

- Some young participants were not as keen to share their recorded Morfo videos with the group. This could have been for several reasons, but seemed to be because they were no longer anonymous.
- Digital recordings of the issues or ideas provides more detail than asking the young people to write out their ideas on worksheets.
- Several young participants also expressed their preference for Minecraft over paper and pens, due to it being more accurate and easier to communicate ideas.

Collaboration and deliberation

- Even when working on their individual ideas, the participants were exploring the virtual world they had created in Minecraft and visiting the buildings of other participants. On many occasions the young participants co-built their ideas, even if it was not a collaborative activity. This demonstrates how much the software lends itself to collaborative actions.
- The young people work really well during the group activity, each working together and building on different elements of the site at the same time, helping each other complete the different structures.
- When it came to presentations, the individuals demonstrated a strong degree of ownership on the different elements of the virtual build that they had created. Rather than saying 'our structure' or 'we built' they were quite vocal in clarifying which elements they had built.
- Several participants cited Minecraft as their favourite activity of the day, purely due to the fact that it enabled them to work as a group.
- When discussing the collaborative Minecraft build ideas with the older people, some of the younger participants took on suggestions which were made to them, such as G412 who added a green roof onto her cafe building at the suggestion of G421 (as illustrated in fig. 57), so despite it not seeming as though the young people were collaborating, they were taking aboard ideas suggested.
- Some of the older participants viewed the suggestions of the young participants as uninformed and naive. As demonstrated by this conversation with G420 and G424

G420: I was just saying, from your point of view and for what you want to achieve, it's going to be much nicer working with the young people who are idealistic and

KD: yeah, they are not always realistic...[sic]... but it's the enthusiasm you take from them and I hope...

G420: ..and then you've got us going 'no hope, no money, no this, no that' ...

G424: But THATS why we balance each other out

KD: You're all here, you have to have the conversation

G424: We just have the knowledge of knowing more, because we're older.

Although when you are young you think you know everything.

Engagement

- Once the young people were given a task to carry out in Minecraft, they were mainly focused and engaged. The room was at times silent whilst the participants completed their builds. If, however they completed their own task, they could become bored - leading them to explore the virtual world in Minecraft (where the other participants were working), resulting in them disturbing other participants, or collaborating with them.
- Technology based activities appeared to engage young participants more than the paper based activities. The paper based ones often required more facilitation, more prompting and directing of questions to young participants (which they appeared to find the least enjoyable - fig.59). Interestingly, this is the opposite of the older participants who favoured the paper based Treasure and Trash, and Ideas and Issues activities, as they found them most useful.

Limitations

In terms of understanding the value of digital tools in producing externalisations, and in communicating ideas, it would have been beneficial to have had participants building physical cardboard/clay models of their ideas, alongside the Minecraft activity. This would have enabled comparisons to be drawn around the method which participants found most useful in creating and sharing their ideas.

The older participants were more observers of the Minecraft activity happening, and not hugely engaged with developing or building upon ideas with the younger people. It may be

useful in further research to pair an older person with a younger person from the beginning of the session, in order to understand what a collaborative vision of these two groups might look like.

The older participants who attended this workshop were very much aware of the plans for the valley gardens area and set in their ideas of what should happen there, which appeared to prevent them from taking seriously (or their willingness to listen to) the ideas of the younger participants. They also appeared guarded in expressing any support for alternative ideas from their own, due to the fact they assumed I worked in some way for Brighton and Hove City council and would use this to document community support for the existing proposals. One participant G422 wasn't as engaged or as well read on the existing council plans, and commented more positively on the designs of the young participants.

Chapter 6 Critical Analysis and Discussion

The aim of this research was to explore whether the use of digital technologies could foster a more inclusive and meaningful community decision making process, than that which currently exists. Focusing specifically on the role digital technologies may have in enhancing the abilities, capacities and opportunities which currently disengaged and disenfranchised younger people have, in order to assist them in engaging with and contributing to the creation of a shared vision for the future of their neighbourhood or town. To address this aim, three research questions were posed:

RQ1: Can undertaking a digital envisioning process support a community in creating a more inclusive and meaningful 'shared vision' for the future of their neighbourhood?

RQ2: Can the co-design and use of a digital envisioning process stimulate imagination and empathy, to facilitate the generation of a more creative vision?

RQ3: Can the co-design and use of a digital envisioning process generate more inclusive and communicable visions of community members?

In seeking to address the research questions, four key themes were used when analysing the research findings, which were based upon knowledge gaps identified in the literature review: **enablers of creativity and ideation** (RQ2) (findings that demonstrated the act of lateral thinking, empathy or switching to a new idea), **externalisation, communication and deliberation** (RQ3) (findings that demonstrated distributed cognition, making explicit an idea, assisting others in understanding an idea, enabling others to comment and respond), **inclusiveness and engagement** (RQ1, RQ3) (finding that demonstrated motivation, self-efficacy, enthusiasm from the targeted user group), and **value of the process** (RQ1). Each of these themes will be discussed and situated in the wider context of the literature and in relation to the digital tools they correspond with. Following this, a critique of the methods used will be conducted reiterating why young people were selected as the main user group of the designed intervention within this research.

6.1 Enablers of lateral thinking, creativity and ideation (Q2)

The literature identified that there are several widely accepted methods of stimulating creativity, such as using: knowledge bundles (Boden 1996), lateral thinking (De bono, 2010), empathic project (Dewey), 'surprise information' (Schön), reframing (Schön & Reid, 1994), all of which disrupt an individual's schema. Using these techniques and building upon on Gedenryd's view that imagination can be stimulated by the interaction between the inside and

outside stimulus (1988), the goal was to understand if digital technologies could elicit these actions, and do so in a way that non-digital tools are unable.

The data suggests that Ageing Booth, when used in combination with Morfo, is able to achieve this disruption of an individual's schema, as did the character prompts with the Morfo app (although to a lesser extent). When using the Ageing Booth together with the Morfo app, the participants really took on the characteristics of the older person they saw on the iPad screen. They would hunch over, alter their voices and expressions and refer to themselves in the first person. They appeared to generate issues and ideas with a new degree of empathic imagination and they were really able to put themselves into the shoes of an older person.

Participant G410: I think it would be really nice to have a park, for someone like me to sit, for people like me to watch my grandchildren play.

Participant G413: I would want a nice old people home and hospitals for old people. but I also want a little park to erm, sit down and read the newspaper.

Participant G412: I would like more places to sit and feed the birds...and stuff like that.

Although the character cards and digital images also successfully prompted the participants to generate alternative issues and ideas, they did not appear to resonate with the participant in the way that the aged face did. Ageing booth provided an immediate reaction, often of horror, then amusement; it was observed time and again the young people were able to put themselves into the position of an older person almost immediately. Little facilitation or questioning was required for them to consider what they liked/disliked or considered important. They demonstrated empathy in often a more considered and serious way than the participants not using the apps. They referred to their issues and ideas in the first person, as “my” and “I”, my issue is, I would want, etc. and not as “an older people would want ...” as was identified by those not using the apps.

Feedback from the young people, when posed with the question: What was the most useful tool to imagine being someone else? Almost all participants stated that Morfo was the most useful tool for doing this, for the following reasons.

Participant G304: You can see their physical reaction Participant

G306: You could imagine what they were thinking of

Participant G02: You can actually see what it would look like and interact with the character you've chosen

When asked how their idea changed following the characterisation activity, these were the following responses.

Participant G301: *I realised different things, people have different needs*

Participant G302: *Because being a fox is totally different from being yourself*

However, some of the young people saw their idea change as the task, and they were merely just doing what they were supposed to do, for example.

Participant G314: *I thought we were meant to do different things*

Suggesting that they were not always empathising with the character they selected at a deeper level, but demonstrating a more performative empathy (Kimbell, 2013). Either way, it did demonstrate they were able to understand someone or something else's needs might be different from their own, and were able to generate an alternative idea based upon this.

Although the use of the digital tools can be considered novel and entertaining, they were useful in engaging participants. The participants who used these apps required less encouragement or facilitation than those in the non-digital groups. This is not to say that facilitation was redundant: guidance was still needed to keep focus on the task in hand and to ensure that once the amusement of seeing their faces aged, wrinkled and hair greyed, they proceeded with the process. Yet the level of prompting required was less and the young people appeared to grasp that they will be older and the mere ability to look at their own face as an older person appeared to bring this reality to light. In contrast, when questioning the non-digital group, a greater level of prompting and questioning was needed. This greater level of facilitation may well have led to the development of ideas that were shaped more by what the facilitators and other participants were saying, as opposed to what the participant actually thought themselves. This activity, either the digital or non-digital version, however stimulated a form of divergent thinking that wasn't about the young people producing the 'correct' answer, but about nudging them to think about alternatives, as per de Bono's suspended judgment (2010).

Digital tools are often criticised in the creativity literature for being too restrictive and not useful for stimulating free thinking and creativity. Minecraft is covered by the term 'gamification', meaning it uses gaming elements to improve user experience in non-game applications (Deterding et al, 2011) and is being continually noted for its value in creativity, education and community based design (Foth et al, 2009). Although limited in obvious ways, such as its blocky appearance and as one participant noted, its inability to draw curves, its use

was observed as stimulating creativity whilst the participants were carrying out their building activities. For example, participant G403 had undergone the characterisation prompt as a football, whose idea was to have an astro turf pitch in the park so it was less muddy. During the building session this idea became a multi-purpose sports pitch where different elements (goals, netball post, tennis net) could be suspended in the air and brought down when a certain 'block' was triggered. This creativity and development of the idea were affordances of the software (i.e. ability to suspend objects in mid-air), the idea only came to them as they were already building the pitch, demonstrating an effect on cognition. To draw, or even build, the same structure in cardboard, would require a skilled artist or model maker.

6.2 Externalisation, communication and collaboration (Q3, Q1)

The gap in the literature identified a lack of understanding in how an envisioning process could assist in the manifestation of a vision i.e. externalise it (Fisher, 2000). In a way that supported all who interacted with it to understand it, and to create more concrete representations of what someone is thinking in their head. The use of the Morfo generated videos and Minecraft supported this in different ways.

Stories and narratives are widely considered to be a strong way of communicating perspectives during deliberation, and short stories can be captured easily and quickly using Morfo. The participants provided more detail when explaining their idea verbally, so producing verbal ideas or stories through the app is a useful and accessible method in terms of the participants sharing and the audience in receiving and understanding the information.

Additionally, as Celi and Rudkin (2015) argue, stories are the main tool through which to frame or better re-frame realities and engage people and stakeholders in an active change, these videos produced are more than a useful means of developing and articulating these frames but also for capturing and sharing them. These stories provide the rationale and argument for change. This was identified when presenting the Lewes Tapestry back to the Town Council members (fig. 60) they were engaged not only by the augmented image technology (Aurasma and Morfo videos), but also by the stories that were being shared, stories that were related to a specific site in Lewes.



Fig. 60 Images and animations embedded in Tapestry being shared (Gant, N., 2016)

This demonstrates that this approach does not only engage young people, the majority of the attendees of the Lewes Town Council meeting were of retirement age, and found the medium of videos engaging. The stories captured this way were often anonymous as they were created using images, drawing and photographs of others, with the added element of a voice changer effect to disguise the speaker. This meant that not only were the participants less conscious of sharing their idea, but in terms of young people potentially sharing their images online, it protected their identity.

Minecraft was not only an interactive way for the participants to externalise their idea, but being such a popular software the majority of the young people it knew well meant that they certainly responded to the specific 'visual language' that it carries. During the evaluation sessions comments were often made about the suitability of the material that had been used to communicate what it represented in the 'real world'. For anyone who uses Minecraft regularly, they will appreciate the finer details and will 'read' the visual creation in a more complete way, having a greater understanding of what is being shown to them. For those individuals who do not use Minecraft, these extra details of materials and functions that can be added will be lost, meaning the creator will have to explain their virtual idea verbally. That said, participants worked hard to make their buildings and ideas look as realistic as possible.

This is positive in that it assisted people in understanding what they were looking at, but also meant they could become too focused on the minutia, limiting the time they spent completing ideas or considering the designs suitability for that area.

In terms of collaboration the Morfo app could communicate a shared vision, either by a group working on one idea collectively and using one character/image to share it (as group 1, workshop 1 did when explaining their aged person's idea). Minecraft, however, was designed for collaborating in a shared space. The participants could view the activities of each other and often help complete building projects for one another, even before the group work was instructed. Being server-based meant that the participants were able, and did, work on the projects from home - demonstrating its potential for collaborative activity even if all the participants are not in the same room. Despite creating an environment which encouraged the formation of a group 'built' space, the young people, although working as part of a team, were keen on claiming **ownership** of the specific structures or elements that they had completed as individuals. During presentations they would often describe parts as "my"; my kitchen, my park, my café, not 'our' kitchen, park or café.

In order for the participants to produce collaborative visions whilst in their groups, they had to deliberate about certain decisions. A concern about bringing the groups together to produce one design was whether they would listen to each other's ideas and create one 'master plan', or whether they would simply build their own ideas in the same area of land. The results from both workshop 2 and workshop 4 demonstrated that the participants were very good at responding to each other's ideas and often incorporated them into a larger joint scheme, or 'master plan'. In both workshops the initial ideas, ideas from character perspectives, ideas from aged perspectives and entirely new ideas can be identified within the final collective vision. Where some ideas have been identified for their similarities and the individuals have 'teamed up' to build something collaboratively, or the effort was made to make space and incorporate multiple ideas into the layout. A consensus isn't necessarily reached about what the singular 'best' vision is for the area, but they appreciated the value of the idea that someone else was providing.

An example of this was in the final presentation of the group 2's vision for Valley Gardens (workshop 4), which detailed the collectively created site as having flowers (G410's original unprompted idea 'make the gardens look more attractive') and a pretty fountain (characterised idea from G410 as the Mazda Fountain) that was lit up so more people would appreciate it. It also included a sports pitch, which had been inspired by G403 (who was a

football in the characterisation activity). Although G403 wasn't in group 2, their idea had been presented earlier in the workshop and seemingly resonated with the participants in group 2. This again demonstrates the value of the process, through the multiple activities the participants are not only generating ideas from other perspectives, but collecting them too.

Another example was during the Easter Minecraft Workshop where the master plan of Group 1 consisted of ideas resulting from the characterisation activity and personal unprompted ideas. This resulted in the inclusion of allotments (generated when a participant was prompted by the Mildred character).

Beyond the digital tools assisting in externalising ideas for the purpose of deliberation and collective creativity, what the tools really provided the young people with, was the confidence to present and share their ideas for evaluation and deliberation. The participants were particularly proud of the creations they produced in Minecraft, each wanting to be first to present their idea. Indeed, they showed no sign of evaluation apprehension (Diehl and Strobe, 1987). The feedback sheets stated that the majority of young people believed using Minecraft was better than pens and paper or modelling materials as it looked more professional, which appeared to play a role in their enthusiasm for sharing their ideas.

When communicating and collaborating their ideas with the older participants, it appeared more difficult to form that shared understanding of the issues and potential ideas. One participant identified this as being caused by the lack of knowledge possessed by a young people which made their ideas idealistic and naive, stating that

G424: We just have the knowledge of knowing more, because we're older. Although when you are young you think you know everything.

G421: I think from her [K. Duggan's] point of view, it will be much more enjoyable working with a bunch of young people, because what she'll be doing is talking to them idealistically, which is lovely. You know, at this age we're not... we're all cynics. But that's what's really lovely, I'd love to see what all their ideas are.

However, the young people's ideas were not all that idealistic, in fact the older participants and the young participants had a lot more ideas in common than they realised. For example:

G421: Buskers corner. Speakers (like the Dyke Road open theatre). To develop a speakers/musicians corner in Victoria gardens, protected by a wall of trees or bushes. Plenty of lighting to make space safer.

G304 Idea as self: *Create something interesting on both sides of the valley gardens, such as an outdoor theatre*

G421 was an older attendee in workshop 4 whilst G304 was a young participant from workshop 3, and they had a very similar idea for the same Valley Gardens areas of Brighton. Demonstrating that despite the older people viewing the younger people as more idealistic and unrealistic, they actually have similar interests which they can build upon.

Another similarity was the idea of flowers and trees through the Valley Garden area.

G410: *More flowers* (Created multiple flower beds and trees whilst in Minecraft)

G424: *Lots of trees/plants to attract wildlife (birds and invertebrates) to add interest as you walk through – because air pollution means it's entirely unsuitable to sit in (except one bench for the elderly/disabled)*

These similarities weren't often noticed by the participants, in some cases due to not being in the same workshop, but maybe because Minecraft, although championed by the young people, may not be the most suitable tool for intergenerational discussions, unless the older participants are more involved during the build stage, as builders and not observers like they were in this instance.

6.3 Inclusiveness and engagement (Q1)

One of the main aims of this study was to create a more inclusive envisioning process for young people, and to use a co-design approach for that reason. By involving young people at the very beginning of the process in the preliminary study, they were able to comment on what digital tools would engage them and which they preferred to use. Working alongside designers, planners and community engagement officers in the preliminary study assisted in identifying not only the tools that the young people identified as being ones they would use, but also what was deemed as having the potential of being useful. Throughout the research the design of the envisioning framework was altered in response to the feedback received and observations made at each workshop, to ensure that it remained an activity that young people would want to engage with.

That said, the use of digital tools and Minecraft appeared to make the workshops much more attractive to those who attended in their free time. Had Minecraft not been used in the summer holiday workshops, it is questionable whether so many young people would have turned up. During the process there were multiple queries of “are we playing on Minecraft soon?”, “When do we get to go on Minecraft?”, “can we go on Minecraft now?” demonstrating the desire to complete the activities in order to progress onto the game that

they were familiar with and enjoyed using. In every workshop that took place in which Minecraft was used, it was listed as the most enjoyable activity by the young people on their feedback forms. Of course, simply because an activity is the most enjoyable does not necessarily make it the most useful. By utilising a software which many young people are aware of, enjoy and will use willingly in their free time, as part of a larger process where the creations and actions arguably become more mindful and meaningful, is a means by which to engage young people as a conversation starting point. Its power to engage was identified time and time again. This is not to claim that the draw of Minecraft is universal: some young people will not find it appealing at all, in the same way that many do not find the idea of town hall meetings appealing. What it offers is another approach to attract a different type of person, via a different medium and creating the opportunity for what was once an unheard voice to be brought into the conversation.

The speed at which ideas, visuals, animations were produced on the apps and in Minecraft also appeared to support the level of engagement that was demonstrated by the participants. They could complete an activity before they became bored, with the interaction with the tablet keeping them focused. The fact that younger people picked up the app so intuitively also appeared to keep them engaged, because they did not need long verbal instructions about what to do. There was a notable confidence and comfort expressed when the young people were brought into the conversation via these means.

There are of course many people who might feel disengaged from the process due to its leaning towards digital technologies. Some people are without access to technologies such as tablets and smart phones or even Wi-Fi, and therefore could be considered excluded from this digitally enabled process. However, this thesis argues that some people are not engaged with the current system of participation, and the use of digital technologies is not a replacement for existing techniques, but an alternative to them, in order to attract some of those who are not currently included - such as young digital natives. Also, the envisioning framework has been designed in such a way that there is a non-digital counterpart for every stage in the activity. This is not to say that those tools and methods would be as successful or as engaging as the digitally supported process, but the options are there (particularly if a certain digital tool is unavailable for groups who would like to use the process). Of the non-digital approaches that were used, whereby the young people were asked to pretend they were old, empathy was present, despite it not being as immediate or personal as the digitally enabled processes. In terms of the characterisation activity, there was very little difference in outputs between the digital and non-digital approaches, what matters in this activity was the prompts

the young people were given; the cartoon character cards with descriptions were too leading, whereas the photographs that depicted the character with no textual information at all worked similarly whether asking the young person to create an idea and issue from their perspective using the digital or non-digital approach.

6.4 Value of the process (Q1)

The main contribution of the envisioning process developed in this research is how it supports a non-designer in carrying out a designerly process to develop a vision. The way that the Envisioning Framework is set out can make it appear as a linear process (fig 61).

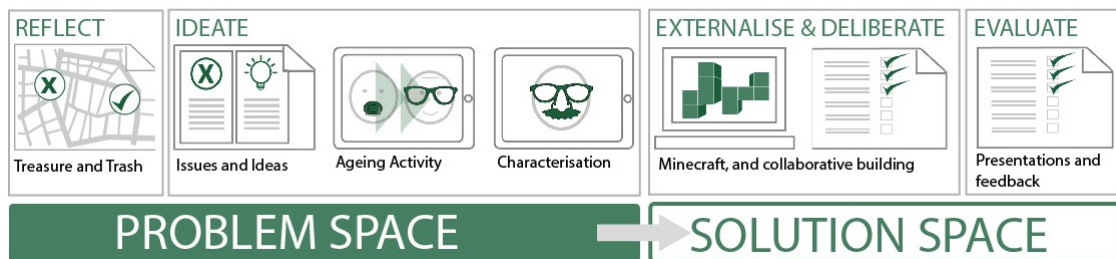


Fig. 61 The seemingly linear envisioning process, Duggan, K (2016)

But what it is actually being facilitated is a far more iterative process where the participant is prompted to move between the problem space and the solution space a number of times, whilst considering these problems through a different perspective each time, working in groups to support the activity of joint enquiry (Steen 2013) (fig.62)

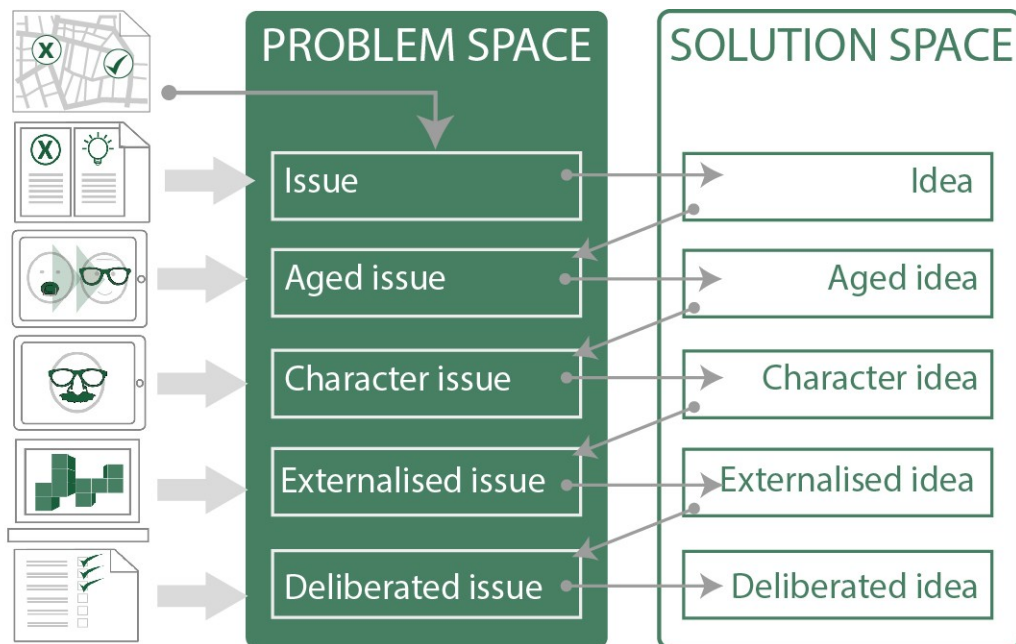


Fig. 62 Visualisation of the process - and how it takes users between the problem space and solution space, Duggan K. (2016)

An individual or group begin with a treasure and trash activity, from which they develop their issues and ideas, but they then re-examine what the issue and idea might be if they were older, and then if they were someone else (character). The activity of externalising their idea also prompts consideration whilst in the virtual environment (limitation on space for example) which may lead to a different solution (shaped by the affordances of the medium i.e. Minecraft provides the externalisation). During the deliberation, someone else's feedback regarding their view of the problem could change what your proposed solution is. This process essentially guides the user through an iterative design process where they are shaping their idea based on the different frame perceptions that are changing at each stage.

Referring back to words of John Stuart Mill (1869), where he states "the only way in which a human being can make some approach to knowing the whole of a subject, is by hearing what can be said about it by persons of every variety of opinion, and by studying all modes in which it can be looked at by every character of mind", describes what this processes aims to achieve. The more an individual is able to reframe how they understand a problem, via altering their perspective using certain prompts, the more likely it is that the solutions will also change. When multiple individuals carry out this activity the chances of generating a shared understanding of the situation are increased, potentially leading to a shared vision (solution).

The activities and tools used in this research (both digital and non-digital) provided (to different degrees) useful functions which supported the generation of vision outputs. Yet without carrying out these activities as part of a process, they would have been useless in terms of supporting the creation of a shared vision - as was identified in the findings of the preliminary workshop and workshop 2. For example, the Treasure and Trash activity was never carried out in workshop 2 and as a result the participants found it difficult to identify an issue, in order to generate an idea. This also became clear whilst carrying out the Lewes 2030 'drop in' workshop, on the occasions where participants sat themselves straight down at a Minecraft laptop and asked "what should I build?". Without going through the process they didn't understand firstly the context of the virtual space they were building in, nor did they have any idea relevant to Lewes Town.

The final outputs produced by the participants in Workshop 4 are shared visions. They were collaboratively created, having considered the perspectives of several participants. Decisions regarding what the shared visions contained were deliberated both before and during the

building process. However, this is not to suggest that what has been created on Minecraft should be adopted and built in the physical world. The shared visions created by the participants are insights into the elements considered important by those involved. By following the process set out in the workshops, the young people have been able to add their voice to a conversation, and to have it questioned and considered from someone else's perspective, using tools and prompts that reframe their understanding of the problem and solution. In terms of deliberation, this has the potential to make the views of older people more rational to the young people (and vice versa, or with other groups) supporting an increasingly shared understanding of the situation. These visions should not be built, but used as a tool that draws people into the conversation.

In terms of addressing Research Question 1, there is clear evidence that undertaking a digital envisioning process can support a community in creating a more inclusive and meaningful 'shared vision' for the future of their neighbourhood. That is not to say that a non-digital process could not facilitate something similar, if it followed the Envisioning Framework used for the digital activities. Yet there is no doubt that the digital tools provided a more inclusive approach for the target audience of young people, in terms of the software that was used and the environment in which the activities took place. In addition to overall value of this approach, additional benefits included speed, accuracy, anonymity, communication, distributed cognition, collaboration, and engagement. The feedback from the workshops indicated that these are all significant in the overall experience of those involved.

There were questions raised by the older participants in Workshop 4 regarding the meaningfulness of the visions produced. G420 in particular believed that the young people were creating and building ideas at such a speed that no development was happening. This concern was not borne out by the outcomes from the workshop. The data generated clearly identified the development of ideas through the process, with certain elements maintained all the way through, while the ideas for buildings changed and grew as the young people worked on their Minecraft builds. I understand that participant G420 viewed the activity as slightly chaotic and directionless, but the participants themselves were used to working, discussing and collaborating at speed, with each having an assigned task to complete. What this observation does bring up is the limitation of using Minecraft to explain ideas to non-Minecraft users.

What the Framework currently appears to lack is a stronger element of education/information or exploration. Reflecting on what is positive and negative, what is useful and necessary, yet

moving from what is not a suitable situation into a more desirable one needs some knowledge of how this situation can be improved. Initially it was considered that through the deliberation phase knowledge would be shared via the different stakeholders, who would each possess different awareness of and about different matters. However, when a group (such as the groups of young people who have participated so far) are working without a larger network of stakeholders, there is a lack in the variety of knowledge available. Therefore, the prompts may need to do more than simply encourage an individual to view something from another perspective. It may even be that an additional research stage should be included, such as performing an interview, in order for the participant to gain some deeper insight to work with.

6.5 Did it make a difference?

When addressing RQ1 surrounding how a digital envisioning process can support a community in creating a more inclusive and meaningful 'shared vision' for the future of their neighbourhood, it is necessary to consider how these visions will be used by decision makers such as the parish or town councils, neighbourhood steering groups or other stakeholders. The methods and data generated from the preliminary study and workshop 2 were presented to the Lewes Town Council and received very positive feedback. The findings and outputs produced from the preliminary study and workshop 2 and the process used were presented to Lewes Town Councilors, and ultimately led to additional workshops carried out by Community21 and Block Builders which utilised the process. These workshops were funded by the Council and have led to the development of thematic identities within the formal neighbourhood plan. This suggests that the designed process has made a difference, but to what extent is yet unknown and the Lewes neighbourhood plan will need to be tracked into its next stages in order to ascertain to what degree the workshops and this process have provided young people with the means and capacity to contribute to the vision and the NP.

The methods in the envisioning framework have also been adopted during workshops carried out by Community21 and Builders in the The Place Maker Space (fig.63). A space in Brighton where communities can come together, use various tools to envision places. In May 2016 Nick Gant with Community21 was invited to present research including findings from this thesis to The Neighbourhood Planning Leads and Public Mobilisation Team at The Cabinet Office and Department of Communities and Local Government.



Fig. 63 The Envisioning Process being utilised at a Place Maker Space Event (Gant, N. 2016)

When addressing research question 3 the use of digital envisioning process did provide a more inclusive means of creating a community vision. The designed Envisioning Framework utilised tools favoured by the young participants, creating a means for young people to become engaged, but more than that it offers a practical guide to rural community councils, parish councils and town councils to engage with more disenfranchised groups. All but 2 of the 50 participants who attended the workshops 1-4 responded on worksheets that they would attend a similar workshop again, mainly providing the reason that it was fun, but there were also other reasons (additional feedback data tables can be found in Appendix G).

G30: Because it was cool and helpful

G30: I really thought it was fun and engaging

Would young people be more likely to become involved in local decision making processes which followed this process? Referring to areas of MOA (motivation, opportunity and ability), each can have said to be addressed by the envisioning framework, meaning that the environment is created for young people to engage. If **motivation** is considered the intrinsic desire to complete an activity for enjoyment or addressing the challenge set, the use of digital technology arguably satisfies this condition when engaging young participants. The eagerness to use the iPads led to ideation activities being undertaken with far greater vigour than when

asked to write out an idea; the desire to use Minecraft motivated the young participants to complete the earlier stages of the process. Without the 'selling point' of Minecraft, it would have been difficult to attract such volumes of young people to give up their school holiday time to participate in an envisioning workshop, demonstrating that the use of digital tools was a huge motivational factor. The **opportunity** was created through the context of the workshop, young people were being invited into a situation to participate, without this it is unlikely that young people would self-motivate to use Minecraft or iPad apps to generate visions for the future - the environment has to be facilitated for them. By co-designing the process with young people, it ensured the digital tools which were selected were those which the young people used, enjoyed and felt proficient with, meaning they had the **ability** to carry out the digitally based activities which were requested from them. Even if a participant had not used Minecraft before, as several who attended the Easter Workshop hadn't, it was picked up by each one of them within an hour. Morfo and Ageing Booth were also unknown to most participants, yet their familiarity with smart devices appeared to lend itself to successfully operating the apps unaided. The tasks listed the most difficult on the feedback sheets were Treasure and Trash (paper based), and completing the feedback sheets (paper based) themselves. The use of these tools is part of the daily habit of the participants, there was not a single attendee who had not used a smart device before and the majority had their own smart phones with them. By having them engage with the process through an app, it was asking them to carry out an activity in a way they would do for leisure.

The research has also addressed certain areas of Community Capacity (Goodman et al 1998; Norton et al, 2002; Gunn et al, 2015, Beckley et al, 2008). The Envisioning Framework's main strength lies in supporting the 'critical reflection' category; compelling process participants to challenge their own assumptions regarding others' desires and actions, through reframing their ideas through the prompts (aged or characterised). It also contributes to the skills category, providing people with ways and means to think creativity, and in a designerly manner. It also provides community engagement officers with the ability to provide young residents with a process to engage with in order to contribute to local discussions.

6.6 Critical review of methodology

The decision to focus on 'young people' during the research was due to several reasons. Firstly, the CDA partners AirS were at that time carrying out research alongside Community21, seeking to improve how rural young people are involved in local decision making - focusing on young people was an emergent aspect of this collaboration. Secondly, through independent review of

the literature it became clear that young people generally were not included in local decision making processes (O'Brien & Moules, 2007; Speak, 2000), although would arguably be the most affected by the outcomes. Finally, the focus on the potentials of digital tools identified during the literature review supported the ongoing engagement of young people as a digitally savvy group.

The analysis of research findings was at times challenging. The qualitative research methods used produced a lot of data: hours of audio and video footage were transcribed, 100s of worksheets and feedback sheets were captured and interpreted, and many animated and virtual outputs were sorted through. It was at times difficult to differentiate the factors which were relevant. Visual data, specifically the video and audio data that were captured could be highly interpretive, whilst the audio recordings provided rich data of the participants' conversations whilst carrying out and presenting their visions, providing opportunities to interpret why actions were being taken by certain individuals and groups. The surveys/feedback sheets handed to the young participants at the end of each session were often filled in sparingly, with minimal detail. On several occasions answers had been altered by the young participants in order to write less, for example.

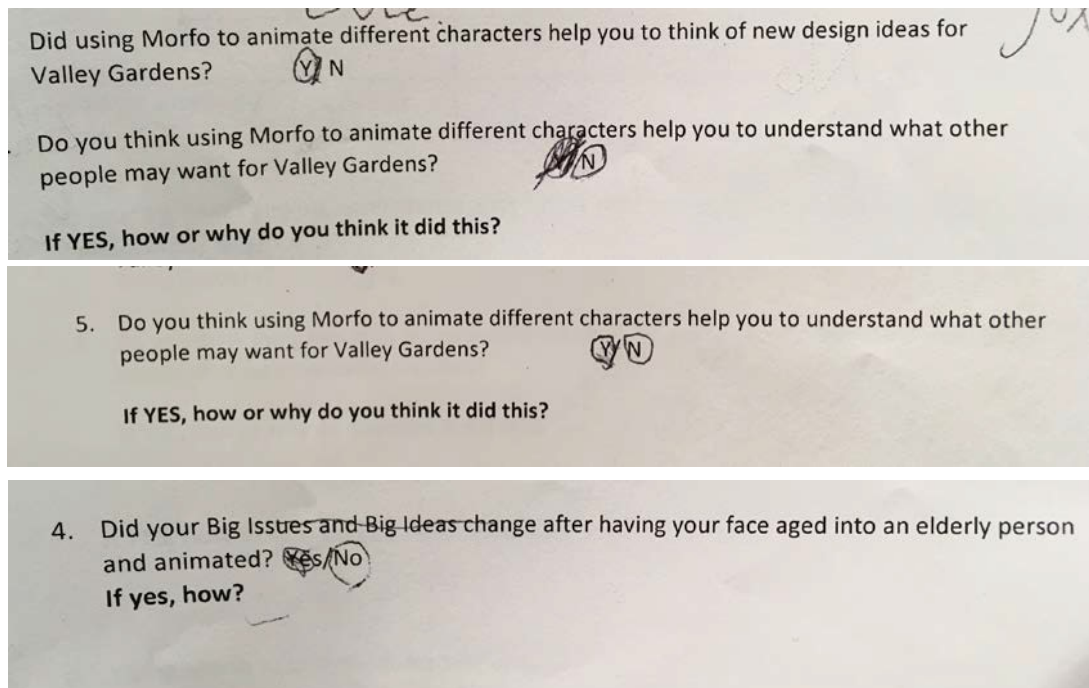


Fig. 64 Examples of feedback forms with altered responses

6.7 Reflection of my role

The design research approach of this study was concerned with facilitating a co-design process, in order to co-create a digital tool that in turn supported a co-design process. This responds to a personal interest surrounding the predictions of designer's roles in the future. Many claims support the view that designers will play a far greater role in the facilitation of collaborative activities (Mau & Leonard, 2004; Inns, 2010), focusing on ways of doing things, involving the design of methods, tools and approaches (Manzini, 2016). This shift feels extremely relevant to this research in terms of my own responsibility in developing a process enabled by certain digital tools, each of which come with their own affordances and limitations to what the user is able to produce as an output.

I was personally keen to create a tool that limited the need for facilitation, allowing people to utilise their own digital technologies, namely smart phones and mobiles devices, in order for them to have the opportunity to contribute their opinions and ideas whilst away from the formal setting of a town hall meeting. However, this research has demonstrated the importance of facilitation within this co-design process, in terms of the MOA framework it is the facilitation sessions and workshops which provide the opportunity element.

I tried not to lead the young people regarding what they considered important for the areas they were designing, yet their limited experience and knowledge of certain matters (such as sustainability, infrastructures, health, business, economic and social issues) did restrict what they were able to produce. Therefore, it may have been better to push and prompt the young participants more and guide them to carry out more research and exploration regarding matters such as sustainability. Yet, the purpose was to capture their issues, concerns and hopes for the village they want in the future, it was important that this wasn't lost.

The relationship with AirS was close during the initial year and a half of this research project, working in collaboration on the Young Digital Citizenship project, and workshops 1 and 2, working from their offices and attending neighbourhood plan steering group meetings in the role of facilitator. The work carried out during this time provided a great knowledge basis surrounding the technicalities and practices of community planning and a greater understanding of what tools had potential, and led to further exploration of the Morfo and Ageing Booth apps - integral tools utilised in the Envisioning Framework. As the Envisioning framework developed and refined, I worked more closely with Block Builders and Community21 for workshops 3 and 4; they provided the equipment, recruited the young people and assisted in Minecraft facilitation, whilst I designed the workshop plans (based on the different versions

of the Envisioning Framework processes).

Chapter 7_ Conclusion and Moving Forward

This research originally set out to address the problem surrounding the means and ways in which community members, under the Localism Act 2011, are being handed an increased responsibility and accountability in making decisions that affect them and the lives of future generations without ensuring that all those who would be affected had the ability, capacity or real opportunity to carry out this task successfully. It focused particularly on the inclusivity and ability of younger people in contributing to such decision-making processes.

Neighbourhood planning was identified as a system that was emblematic of a larger problem concerning citizen decision-making processes, with current practices sustaining a democratic deficit in who is able, willing and invited to contribute to the plan. Additionally, the practice of producing a neighbourhood plan demanded the production of a 'shared vision' from the community members, a 'shared vision' that would act as the basis for developing future objectives and planning policies. Again the assumption was made that community members had an understanding of what a vision was and had the skills and knowledge to create one collaboratively, as well as a general assumption that the creation of a 'shared vision' was even possible. Young people were identified as a disenfranchised group (Leach and Kingman, 2012; Goodman and Young, 2013) and who would arguably be the most affected by the decisions made, whilst also being the least involved in the process (due to anyone under 18 being unable to even vote in the Neighbourhood Planning referendum). This group was therefore selected as a target user group for this research, for their underrepresented status and due to fact the CDA partners, AirS, were carrying out research focusing on empowering young people (YDC) alongside Community21.

The knowledge gaps identified in the literature review were concerned with the lack of processes and resources in place to support the capacity that communities have to undertake a generative inclusive envisioning procedure, a procedure that takes into account the Path of Expression and Path of Explanation (Sarkissian, 2010) when creating a vision of the future of a community. Appendix B identified an array of tools available, both digital and non-digital, yet found each of them lacking in some aspect, particularly in their ability to: support deeper reflection and questioning of community members' own perspectives (frames), support the sharing of opinions through a constructive generative dialogue, and support a more inclusive approach. The gap in knowledge was whether the design of digitally supported tools and processes could result in a more inclusive process which elicited creativity, imagination and empathy, for the purpose of reframing perspectives and generating alternative solutions and

ideas as a group, and as a means of generating a shared understanding as a base to build the shared vision (in order to move beyond the limited tools and resources available). There was also a gap in knowledge around whether the creation of a truly 'shared vision' was possible (Shiple, 2001), what that might look like, and what the act and role of envisioning is within a decision-making process such as neighbourhood planning and whether it is currently a practice being supported and used in the most suitable and meaningful way?

This thesis set out to address this problem, stating that the use of digital technology may provide some value in supporting communities, particularly young people, in producing this shared vision by facilitating a more inclusive, generative, creative process. A process which would assist currently disengaged members of the community in undertaking activities to reflect on, express, communicate and deliberate their ideas via a means that was suitable and relevant to them, with the purpose of being able to contribute to a shared understanding of how people experience their town or village now, and how they should ideally experience it in the future; to create a shared vision. To address the identified gaps, the study set out to answer the following research questions:

RQ1: Can undertaking a digital envisioning process support a community in creating a more inclusive and meaningful 'shared vision' for the future of their neighbourhood?

RQ2: Can the co-design and use of a digital envisioning process stimulate imagination and empathy, to facilitate the generation of a more creative vision?

RQ3: Can the co-design and use of digital envisioning process generate more inclusive and communicable visions of community members?

RQ1:

When addressing this question it is important to first explore whether a shared vision was achieved by the participants during the workshop. A vision was considered as more or less an explicit claim or expression of a future that is idealised in order to mobilise present potential more into the direction of this future (Van der Helm, 2009), a representation of ideas that was communicable. A 'shared vision' was considered to be an inclusive, collaborative version of this, developed from a shared understanding of the problem, which represented the concerns and views of those involved.

On one hand, the Envisioning Framework did support a group of individuals in generating a 'shared vision' of sorts by taking them through a design inspired process which culminated in an output that was more than the sum of individual ideas, or a 'wish-list' of things they wanted to

see in their community. Instead, it was shaped by the participants' experiences of the process and interactions with the tools, activities and each other, which prompted them to consider how others within the community might think about, feel about, and experience the neighbourhood or village. The 'shared visions' at the end of workshop four, were the externalisation of ideas which had been challenged, added to, adapted, inspired, and collectively developed by the actions that took place through the use of the tools and the process.

On the other hand, the term 'community' in this research has always related to the group of people who are geographically tied to the area of land that is being envisaged, (i.e. those who live in or around that area). So when RQ1 refers to 'supporting a community in creating a more inclusive and meaningful 'shared vision'', this research hasn't gone far enough to answer that, as representatives of the entire community spectrum were not involved in the workshops due to the focus being on young people. It appears the tool succeeded in generating a shared vision of the people who were in the room but, like many existing tools, it is dependent on who is invited into the room.

I would argue that the insights produced from this research suggest that it is possible to facilitate a process that supports a deeper, *more meaningful* type of vision. One that moves beyond individuals simply expressing their own opinions, whether vocalising them in a meeting, ticking a box of pre-determined choices on a survey, or expressing them on a card attached to a model, and seeing which one is the most popular. It instead supports a process and environment in which young people are able and willing to listen (Manzini, 2016), firstly, to each other's perspectives and ideas and, secondly, to the potential views of other residents. By breaking down the process into a series of reflective and generative cycles that stimulated the reframing of perspectives (Schön & Reid, 1994), minds were changed and new ideas were jointly created that represented different views and knowledge (Steen, 2013), suggesting that imagination and creativity has been brought into the deliberation process (Noveck, 1999) and may foster some elements of social learning (Kanra, 2012). These activities have supported the generation of new shared perspectives, to a degree, by using techniques which elicit empathy to understand other perspectives in order to draw them into the visions.

The most apparent insight from this study is that the *process* was vital (that is, the process of moving back and forth between the problem and solution space, considering each from multiple perspectives). Whether conducted digitally or non-digitally, it was the stage that supported the repeated reflection on the problem space and the solution space through

different perspectives. Digitally supported processes are not the quick fix answer to creativity, deliberation, understanding, inclusivity or collaboration, they are simply tools which offer up another way to do something, tools which provide another way to carry out actions. The digital tools can only offer support to the actions that have been identified as necessary, and in the field of collaborative envisioning I don't believe that enough research has occurred in order to identify what these actions might be. Many are described in appendix B, yet it is the iterative, reflective and structured use of these tools and activities which appears to hold the real value.

In terms of engaging young people, the digital tools utilised played a vital role in that they challenged and amused the audience (particularly Morfo and Ageing Booth). The young participants were *able and willing* to listen to each other, in part due to the digital tools being in a language they understood and felt comfortable with and also due to the digital tools (namely Minecraft) being an area they actively wanted to learn more about from each other (in terms of technical skills). I believe the process holds some real value, but could be utilised with a different set of tools for a different audience. What Minecraft was able to offer, in terms of supporting a 'shared vision', was that the activity and externalisation of ideas occurred in a 'shared space'. This quality appears to form a useful platform (Foth et al, 2009), in supporting collaborative community-based design, in which changes happened in real time around the participant's avatars, and as such they responded to each other's actions.

RQ2:

When discussing whether the digitally supporting envisioning process stimulated 'imagination and empathy, to facilitate the generation of a *more* creative vision', there needs to be a guide of what '*more creative*' consists of and looks like. This thesis argues that a more creative vision is one which derives from an expanded cognition (Lawson, 2005), one which is the result of having stimulated participants to reflect on and question what and how they think about situations in order to generate an idea that wasn't previously considered (Boden, 1996). One which stimulates lateral thinking (De Bono, 2010) and imagination (Fesmire, 2003).

The data did appear to suggest that the envisioning framework did go some way to supporting this, as both lateral thinking, imagination and empathy appeared to be elicited through the use of the Morfo app when used with character photos or the Ageing Booth app. This was made apparent not only through the Morfo videos generated in which the individual's perceived problems and solutions altered having undergone the activity, but ultimately through the visualisation of shared group visions when utilising Minecraft, whereby their 'buildings' and ideas for what the area needed were altered throughout the process. What was identified was the value of the different prompts utilised, the illustrated character prompts with written

details about their personalities actually limited the creativity of the young people, whilst the more ambiguous photographs allowed the young people to use their imagination more and create their own narratives for these characters.

Whether the digital tools supported a *more* creative vision than non-digital tools is a more contentious issue. It appeared from the results that the ageing prompt (using Ageing Booth with Morfo) generated more empathic visions than without using the apps and iPads (identified through the comments made and the tense in which they referred to themselves in). When the young people had the ability to see themselves as 'old' it really appeared to resonate with them and lead to a shift in perspective, at times resulting in the exact opposite issue and idea than they had just shared unprompted. The data suggested that the use of these animated character prompts/aged face methods supported the re-framing of the issue, which is considered a design thinker attribute (Paton & Dorst, 2011). This reframing helped to generate new ideas (Celi and Rudkin, 2015) by causing the individual to redefine the problem, or consider it from another's perspective, leading to a different idea than they would have considered without the prompt. The use of these tools offers something different to any of the resources reviewed in appendix B, in terms of stimulating a deeper consideration of what others may want, and how a person's own needs might change in the future. However, the fairly low numbers of participants used in this research isn't enough to be conclusive, merely indicative.

Minecraft was not only a tool through which the young people could communicate their ideas and visions, but it also supported creativity in and of itself. This was less lateral thinking or empathy-stimulated, but driven by a far deeper knowledge of and skill using Minecraft, relating to Weisberg's (1999) notion of using your knowledge to carry out a trial and error process to create something innovative. This was demonstrated to a degree in Minecraft, where ideas that were discussed and set out at the beginning of build sessions altered frequently during the build itself, lessons and techniques of Minecraft that the participants had gained prior to the workshops enabled them to develop and adapt their creations and visions. The ability to 'fly' around the virtual world and explore what other participants were building also led to ideas inspiring other builds. The affordances offered by Minecraft also enabled the young people to develop their structures and visualise their ideas within the virtual context of Valley Gardens (or Lewes Town). This meant the young people were not thinking of their ideas in isolation, but responding to existing terrains that were represented in the virtual world.

RQ3:

In terms of being inclusive to a currently unrepresented and disengaged group (young people) then yes, the co-design and use of a digital envisioning process can be seen as more inclusive, especially when compared to the current practices and resources identified in appendix B, which were predominantly aimed at an adult audience. By working with young people to design the envisioning framework, insights were gained into the ways and means *they* felt were useful, purposeful and suitable to communicate and share ideas. The final envisioning framework incorporated a platform (Minecraft) which the young people felt as though they were the experts of, and as a result felt enabled by this medium. The workshops appeared to provide the young participants with the elements within the MOA framework (Plotnik, 2002). In terms of motivation, it provided them with the opportunity to engage with activities and software (Minecraft, iPads and apps) that they enjoyed using, as well as providing them with a challenge to complete using them (Ryan and Deci, 2000). The young people were also interested in developing their own Minecraft skills, this workshop provided them the opportunity to have conversations around how to build things a certain way and how to perform different technical tasks. The different envisioning contexts in which the workshops were set around provided an opportunity for the young people to have their say in real developments. The designed envisioning framework suited their abilities, not only regarding their capabilities surrounding technology, but by setting the activities in the workshop at the right tone, which challenged them in a way that didn't overwhelm them and allowed them to undertake a problem they felt they could solve (Pieters, 1991; Rothschild, 1999).

In terms of being *more inclusive* from the viewpoint of including many different demographic representatives from the community, then the process can be seen as maybe not more inclusive. The digitally supported envisioning framework was mainly tested with young people, and of the older people who were present in the workshop, although intrigued, they did not respond to the digital element of envisioning in an entirely positive way. They found the Morfo elements novel and entertaining but lacked confidence in operating the app without assistance, suggesting the apps used in the session are certainly not suitable for everyone.

They also tended to sit back and watch the young people use Minecraft, not wanting or feeling able to take the control. In terms of the MOA framework, the workshop was motivational for them as they were aware of the Valley Gardens development, with four out of five attending specifically to voice their objection to road reductions, and one just wanting more information around what was happening on the site. The location of the workshop was local, which gave them the opportunity to voice their opinions, and the paper-based activities were well received as (after clarification) they understood what to do. The digital elements, however, did not

appear to be suited to their abilities or interests.

Regarding its value in producing *more communicable* visions, the envisioning framework can be considered as fairly successful. The digital tools utilised as part of the Envisioning Framework process assisted the communication of visions in two ways: 1) producing short videos via Morfo (individual visions) whose audio described the issues and ideas of the maker and 2) virtual representations of the neighbourhood or village in question created using Minecraft (individual and shared visions). What Morfo provides in terms of communication and sharing of information is its affordance to produce an anonymous (when using character prompts, or aged faces), audio-visual story which externalises the participant's opinion or idea. This not only protects the identity of the young person being shared digitally (from a safety standpoint), but the participants appeared to be much more willing to produce a video that was anonymised. The use of visuals is well documented as being useful to share information more effectively (Veroot et al, 2010), and these videos are often engaging and at times amusing whilst making their point. The Tapestry Map (along with Aurasma) utilised in preliminary studies helped to contextualise these opinions within the location that the user was discussing, so viewers could identify where the idea or issue was for.

Using Minecraft for young people provided a platform for them to produce visions that they were confident and proud to share. The externalisations produced on this platform could be described as 'blocky' but the young people appeared to see past this as, for those who (had previously) used the software, it was a shared language. Working collaboratively within the virtual space enabled the users to 'visit' each other's builds, pose questions (either verbally or through Minecraft's messaging system), and even respond to others' ideas in a more creative fashion, i.e. alter their build (as was done to the skate-park in Workshop 2). It also appeared to be a useful tool for communicating, in terms of presenting the visions to others, i.e. the presentation to participants' parents on day 2 of workshop 4, who understood and commented upon what they were being shown. The older participants also understood what the younger participants were showing them, even if they didn't agree with their suggestions or the process. However, on each of these occasions the creator/builder of the structure was there to explain what the viewer was looking at and could clarify details when needed. It might lose some clarity if it was shown without a guide. What a digital platform such as Minecraft offers is an increased telepresence, which is the 'sensation of being there' (Jesselsteijn, 2000), meaning that the young people were not being presented with plans or scale models, but with virtual environments that they could walk around, explore in and change if they saw fit.

The outputs of the Lewes Town workshop, presented to the Lewes Town Council, suggested

that the digitally-supported envisioning process created communicable visions that could be accessed and understood by all age groups. All those who attended the presentation responded positively to the outputs (Minecraft 'walk through' visualisation, scale model generated from Minecraft, tapestry with embedded Morfo animations), so much so that they commissioned further engagement workshops using the process.

Contribution to knowledge

This thesis contributes to the knowledge surrounding the use of digital technologies in supporting an inclusive imaginative envisioning process for the purpose of community development, through the design of a digitally-supported Envisioning Framework. Through the construction, iteration and use with participants, the data generated using this process framework contributes to discussions surrounding the value of digital tools in facilitating young people to participate in a collaborative envisioning process by providing the space, environment and conditions for necessary activities to occur. I.e. the use of Morfo, Ageing Booth apps, and Minecraft software within the envisioning process, focused more on ensuring the skills, abilities, motivations and opportunities of young people were catered for (Speak 2000). However, the main contribution was that the use of the tools appeared to provide something new in terms of stimulating empathy in order to change/disrupt perception, which led to the generation of alternate shared ideas. Having only carried out a limited number of workshops, these insights are anecdotal but appeared to generate an imaginative shared vision that does not seem to be supported through any other existing tools or processes.

Through the use of the Aging Booth app in combination with the Morfo app, the young people were engaged in listening to others' points of view (whether it was the perspective of an older person or a fox), and altered their designs accordingly, taking into account what someone else would like and dislike.

This work also contributes at a practical level, providing local authorities and private sector organisations (such as Community21, BlockBuilders and Exploring Senses) with a process that can be used as part of consultation events concerning community decision-making and engagement, and which begins to address the gap identified around local authorities not understanding what good public engagement is (Coleman and Firmstone, 2014), or how (or why) to approach young people (Goodman and Young, 2013). This framework provides a detailed step-by-step process, which provides examples of tools that support young people through an iterative design process (moving between the problem space and the solution

space) in order to create visions which can be contributed to a neighbourhood planning process (or other community-led design decisions). The tool kit developed from the preliminary study and workshop 2 is available on the Community21 website (community21.org/toolbox/6626/) and is already being put to practical use by companies such as BlockBuilders, and within Brighton's Place Maker Space.

It has also contributed to the debates surrounding the practice of Research Design as a means of contributing to the discourse of practicing design as a knowledge-generating activity. There was strong evidence that the design and development of the Envisioning Framework, and its utilisation with young and older people within the workshops, did generate new knowledge; knowledge which could not have been generated through an alternative approach. The methods used to generate these findings are consistent with current practices in research through design, and may offer some new insights into the direction of travel if we want to develop a coherent conceptual approach to data generation that is sufficient for producing relevant and rigorous theory (Zimmerman, et al, 2010).

The final contribution is to the general discourse of envisioning within planning. It identifies that a more joined-up thinking approach may be required around the process and value of envisioning, both in regards to supporting a shared vision as well as a deeper more critical exploration of what substantiates (or should substantiate) a vision and a shared vision. It also pulls into question what a vision's role is within a neighbourhood plan. Many organisations, even those who carry out the most creative and engaging envisioning methods and event days, use the information they gather in a similar reductive manner, not really creating a shared vision or even supporting generative deliberation (appendix B). The process of envisioning should be more generative and collectively creative. It isn't about collecting as many ideas and opinions as possible from as many people as possible via 'wish boards' and tallying up which are the most popular. It needs to be about reflecting on and sharing experiences, and ensuring these perspectives are communicated to, and understood by, others in order to recognise and build this into a shared understanding of a situation, from which to develop a vision. This research has only gone some way in identifying elements that are entangled within an envisioning process, and which can be supported by a designed process amongst young people, such as methods for reflecting and reframing, understanding others' opinions and ideas and generating alternate ideas collectively.

Limitations of the study and potential for future research

Although the outputs produced following this envisioning process can be considered a 'shared vision' of the young participants within the groups, it cannot be considered a shared vision of the community at large. It isn't a vision to be implemented, but one which needs to be seen, understood, and discussed by other stakeholders and decision makers within the planning process in order to incorporate into, or use to generate, a new whole community vision. This demonstrates the 'wicked' aspects of visions, there is no stopping point, apart from the restrictions of time and resources. Unfortunately, despite the outputs of the Lewes workshop being presented to the Town Council (and further workshops conducted with young people outside the scope of this research), the affect or role they had in informing or shaping the ultimate 'vision' which will be submitted as part of the Neighbourhood Plan is not yet known. This limits what can be claimed regarding the value of the outputs when communicating the visions to decision-makers and other residents. This longer-term study requires further investigation, including the observation and monitoring of neighbourhoods and communities that utilise the Envisioning Framework process and the tools it incorporates. How will the ideas translate into 'vision statements' submitted as part of a neighbourhood plan? Will their ideas be lost in the translation into technical planning language? Further studies into how planners interpret and use these new forms of 'visions' is required to address these questions.

Of the five older participants who attended the second session, three participants seemed to hold firm views that nothing should change in the discussed location (Valley Gardens, Brighton) and had a focus on protecting the status quo. Envisioning in a positive generative manner did appear to be an activity that was more suitable for young people to undertake. However, having only engaged with 7 older people (in contrast to the 50+ young people) across the studies and workshops, there isn't enough data to support this and further workshops with more varied ages would be useful in exploring this issue.

The small sample size of participants presents a limitation in making generalised contributions to knowledge, which is a common limitation to qualitative research studies. The breadth of the findings is also limited to the small groups of young local people who participated. However, if the Envisioning Framework was rolled-out at a much larger scale in future studies and implemented across broader and more diverse groups, in terms of age, background and location, a greater amount of data could be generated, leading to broader and more generalised insights.

The young people who attended workshops 2 - 4 did so via BlockBuilders, and therefore had the understanding and desire to use Minecraft in these sessions. Although it is considered a popular platform amongst young people, this was not a random sample of young people. The group enjoyed using Minecraft and had volunteered to the session on this basis, meaning engagement on the day and enjoyment levels were inevitably going to be high. Therefore, these findings, although representing the opinions of the participants, do not represent young people as a whole.

A limiting factor was that participants were not all residents of the 'local community', in workshops 2 they were made up of a mix of young people who lived in the surrounding villages of Lewes, but not necessarily residents of the Town of Lewes itself. In workshops 3 and 4, the participants were residents of Brighton and Hove, but not necessarily familiar with the vicinity of the Valley Gardens development. This meant that they had limited knowledge, awareness and levels of investment/concern when reflecting on and developing ideas for their visions. It would be interesting in future workshops to ensure that the participants were from the immediate local community, to understand if the ideas and engagement would be affected.

The study seeks to support local authorities and organisations to undertake an envisioning process with their community, however this process hasn't been led (as far as I'm aware) by anyone other than those who were part of the YDC preliminary study and Blockbuilders, therefore its suitability as a tool is not ratified. In the future I plan to package the Envisioning Framework (including process, worksheets, and guides to tools - digital and non-digital) and send it out to local authorities and rural community councils for them to test and feedback the usability and value.

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Appendices

Appendix A Organisations who use 'vision' in NP guides

Extended list of organisations using the term 'vision' of shared vision in reference to neighbourhood or community planning.

Organisation	Use of the term 'Vision'
Planning Practice Guidance – online resource directed to by Planning Aid, supported by the Royal Institution of Town Planning (RITP)	<p>“Neighbourhood planning gives communities direct power to develop a shared vision for their neighbourhood and shape the development and growth of their local area”</p> <p>http://planningguidance.communities.gov.uk/blog/guidance/neighbourhood-planning/what-is-neighbourhood-planning/</p>
Campaign to protect rural England (CTRE) with the National Association of Local Councils (NALC)	<p>“Develop a shared vision for your neighbourhood” first point listed for what a neighbourhood plan is used for, from CTRE Guide p10</p>
Planning Help (CPRE) Neighbourhood plan - stages	<p>"There is no requirement to develop a vision or objectives, but you may find it useful to have one or the other, or both, to help guide the preparation of your Neighbourhood Plan. A vision and objectives can help to make it clear what your Neighbourhood Plan is aiming to achieve."</p> <p>http://planninghelp.cpre.org.uk/improve-where-you-live/shape-your-local-area/neighbourhood-plans/step-3-develop-a-vision-and-objectives</p>
Our Neighbourhood Planning.org	<p>"A neighbourhood plan vision is an overarching statement, or series of statements, describing what you want your neighbourhood area to be like at the end of the plan period. Your vision should be concise and locally distinctive and it may cover what you hope the area will look like, what facilities will be needed and what it will be like to live and work there"</p> <p>http://www.ourneighbourhoodplanning.org.uk/storage/resources/documents/How_to_develop_a_vision_and_objectives.pdf</p>

Appendix B: Existing Tools and methods for public engagement in neighbourhood and community planning

The list below was generated through online searches of tools and resources that offered support to community planning and neighbourhood planning. The activities are a mix of digital and non-digital, inspired greatly by the 'Community Planning Toolkit' developed by Community Places (2014) www.communityplanningtoolkit.org/sites/default/files/Engagement.pdf, Communityplanning.net, the Locality website and through attending a Nesta event entitled 'Digital Tools and Neighbourhood Planning' led by Tony Burton in July 2014.

Tool/method	Description	Positive	limitations
Photography	Cameras provided to people of all ages to capture their likes and dislikes in an area. Results can be displayed to prompt discussion	Visual communication is the most easily understood.	Dependent on skill of individuals. Difficult to interpret what they were trying to highlight if not annotated correctly.
Vox Pox	Short snappy interviews with people in different locations at different times	Are able to collect and share views and stories from different individuals in an engaging format	Requires certain skill from the individuals and therefore may not be suitable for all.
Artwork	Hold a competition/workshop where people produce artwork of the changes they hope to see, or their ideal environment.	Suitable for all ages	Dependent on the creative skills of individuals. Meaning is reliant on ability to interpret participants ideas
Community Mapping	Use maps and photographs of a specific area to illustrate how people view that area: what they like/dislike or improvements they would like to see. Can map assets, facilities, transport. These ideas could be recorded on post-its or pre-prepared cards. Discussion should be facilitated to help people explore issues.	Stimulates discussion Can help people understand their community in different ways	Can generate ideas not possible to implement. Difficult to interpret ideas. Participants need to be familiar with local area
Planning for Real	Make a physical model of the area from cardboard and other materials. Using cards, residents are able to write down what they don't like, what they would like to see and add the card onto the area of the model it represents. These cards are then counted, with the most popular and recurring points collected to form discussion points from.	Suitable for all age groups.	Needs a high level of facilitation.
Public meetings	Provide an opportunity to consult large numbers of people. Opportunities for participants to set or influence the agenda and ask questions of stakeholders.	Enables large numbers of people to have their say Provides opportunity to explain process Enables participants to develop networks	Unlikely to be representative – not everyone can attend Attendance is low unless people feel personally concerned (or there to reject something) Many inhibited from

			speaking in a large group. traditional formats can limit audience and lead to conflict.
Workshops	Enable people to discuss their ideas in an open and relaxed atmosphere. Workshops can take a variety of formats: to exchange information, to discuss the strengths and weaknesses, opportunities and threats of an idea or project, to obtain ideas and innovative thinking for a way forward for a project.	Encourages active discussion Can be designed for a specific purpose can be directly targeted at excluded or disenfranchised groups (such as the young)	With small groups, it is difficult to be sure all stakeholders or interest groups are represented Workshops can be dominated by confident individuals Requires experienced facilitators
Focus groups	Open and relaxed atmosphere, designed specifically to concentrate on a single issue or programme of topics and discuss these.	As above	As above
Forums	Regular meeting of people who represent a group or organization and may be issue or area based. Those involved generally comprise members of civic, political, professional, economic or social groups from local areas. Useful for setting up groups of specific people (i.e. young, but often attended by the usual suspects)	Helps to maintain momentum, commitment. Enthusiasm, and encourages wider participation can address specific local concerns	Often comprise representatives from existing local groups, rather than individuals from the community may become 'talking-shops' rather than action oriented. Potential to become rule-bound and bureaucratic potential for confusion or conflict over the respective roles and responsibilities of local representatives.
Community surveys	Questionnaire surveys can be undertaken to identify the needs and views of a large number of people in standard format. Main stages are defining the sample size and type of information required; deciding on survey to be used (postal, drop and collect, telephone, email); survey design: piloting the survey; undertaking the survey and post-completion analysis of the results. Often best to use short and concise survey, where people's views on an issue are being sought.	Gain views of a large number of people Useful for qualitative data In principle, data can be compared over time or with results from elsewhere useful for identifying and evidencing need	Need to be well designed and coded to get 'useable' answers Large questionnaire surveys are time consuming and labor intensive Information may be limited do not offer any real sense of community engagement or provide opportunity for people to exchange views Typical response rates are between 10-20%
Social media/online	People are able to choose when and where and for how long they want to participate.	Choose convenient time Particularly useful for	May need a moderator to oversee comments (expensive

discussion forums		those who are home bound (carers, elderly, parents with young children) Can create space to exchange views Cost effective reach large numbers of people	and time consuming) Excludes those who don't have access to the internet some people may feel intimidated.
Online surveys	A series of specific questions are sent out to the community households, in order to gain insights around a set of pre-defined issues and areas of interest.	Can reach large numbers of people Less time consuming than a workshop	May have low response levels. People are limited to the boundaries set by the question. Only receive individual opinions, or the perspective of one adult in the household (doesn't tend to engage young people).
Future Search	A 2-3-day conference with 'visioning' at its core. Explores the past, present and future of a community with the aim of a strategic plan. Around 8 groups of 8 people discuss past, current events, present proud and sorry events in community, discuss ideal future vision, identify some common ground, follow up with action planning.	Can accommodate large numbers of diverse people participants take ownership of process power issues reduced A lot can be achieved in one meeting traditionally unrepresented minority groups can be targeted	Sometimes seen as the end in itself as opposed to the beginning of a process. Can be expensive to hold and require a great deal of organizing. Requires time and commitment from both participants and coordinators. The vision is limited to those in the room.
Street stalls	Outdoor display such as idea or graffiti walls which can be used to capture the views and comments of a large number of people. Maps and plans for an area or project can be displayed and passer-by asked to comment on particular issues and these, generate ideas or votes for particular activities or facilities	Can collect the views of a large number of people interactive engages and generates interest can reach people who may not normally participate	Can generate a large amount of data requires advanced planning and preparation requires several facilitators to engage with people May be affected by weather conditions.

Digital tools and resources (apps/websites)			
Community planning.net	A community planning 'how to' website containing tools, methods, principles, case studies, information on policy and law – with an area focusing on Neighbourhood Planning. In terms of creating a vision, the site provides the following process:	The approach to visioning highlighted here supports the reflection of the area (across prompted	Lot of time and facilitation required, as well as a lot of organizing. The vision is still limited to those

	<p>METHODS Community Profiling A family of methods which actively involve the community in building up a picture of its nature, needs and resources.</p> <p>METHODS Street stall Engaging people where they are.</p> <p>METHODS Reconnaissance trip Inspection of the neighbourhood by mixed teams of local people and technical experts.</p> <p>METHODS Ideas competition Stimulating creative thinking</p> <p>METHODS The Internet The new frontier of emerging methods of engagement</p> <p>METHODS A-Z Study tour Visit inspiring places elsewhere and meet people who made it happen.</p> <p>(from http://www.communityplanning.net/neighbourhoodplanning/npprocess.php)</p>	<p>categories), a means to collect opinions, a means to explore the views of those with different perspectives, a means to include generative ideas, a means to stimulate imagination and possibilities.</p>	<p>who are present at the different events. The website lists these activities, but doesn't make clear whether it is a process, or if just picking one will do.</p>
Urban interactive studio	<p>Online engagement tool to improve outreach and participation in civic projects. Engaging Plans: reaches, informs and involves citizens – is a one-stop hub for project communications, document keeping and events. They offer several engaging apps which support the collaborative mapping of community assets, collect observations and opinions of residents, introduce design concepts, translate long documents into interactive learning, examine budget priorities, explore alignment with various scenarios.</p> <p>https://www.urbaninteractivestudio.com/</p>	<p>Keeps everyone up to date with information, stages and decisions.</p>	<p>Communication tools – not a creative tool.</p> <p>Have to pay</p> <p>Not focused on young people – quite technical</p>
Wordle	<p>Word cloud generator. The clouds give greater prominence to words that appear more frequently in the source text.</p>	<p>Helps to identify the prominent themes which concern people.</p>	<p>Sum of words, what if two main words are contradictory? No discussion. No vision. Not ideal.</p>
Debategraph	<p>Believes complex debates can be mapped comprehensively, with all of the pertinent issues, positions, arguments, and evidence represented in a transparent and coherent visual structure, which anyone with the web can contribute to.</p> <p>Debate mapping involves three steps:</p> <ol style="list-style-type: none"> 1. Breaking down the subject debated into meaningful parts; 2. Identifying the relationships between those parts; and, 3. Presenting the parts and their relationships visually. <p>http://debategraph.org/home</p>	<p>Allows people to add ideas, comments, cross links to 'webs' of information.</p>	<p>A fairly complicated way to look at the issues.</p> <p>Still not creating a vision, but a restructured 'discussion board' which faces the same issues as general online discussion.</p>

			Reliant on language skills and writing skills.
Commonplace 'Crowd sourced consultation'	Web based tool to collect people's views on local issues. Used by local authorities, housing associations and community groups. Able to add comments using a tablet, PC or smartphone, creating information that can be viewed, analyzed and exported as evidence.	It claims to reach people that traditional community engagement methods do not. It enables the facilitators to ask the questions they want, and enables people to contribute in seconds (which can be read in real time).	It is essentially a digital survey tool, which can be accessed by a mobile device and communicated through social media – yet it simply enables people to share their own view. It doesn't request they consider other perspectives or create anything.
Planning Aid	The planning aid advice section of the Royal Town Planning Institute (RTPI) containing a section dedicated to Neighbourhood Plans. This includes resources, advice, guidance, and links to external resources.		Multiple options and approaches to choose from - Used many of the activities listed at the top of this table.
Sticky World	A web based tool that enables users to add 'sticky notes' on to 360 degree virtual tours of building and spaces. Michael Kohn (owner) states his intention is trying to build a platform that helps everyone shape the world together, describing it as 'a convenient way to engage different stakeholders throughout a project's life cycle'.	It allows users to add different visual media onto online representations of real spaces. It contains 'rooms' which are online spaces which host discussions. As a visual communication tool, the use of the 'sticky notes' placed in the virtual environment (much like Google's Street View function) assist in orientating users more successfully than maps.	Quality of discussions – arguing over own points of view never reaching an agreement and not developing a new idea. Is it something young people want to use?
Mapping for change	A web based tool whose mission is to "empower individuals and communities to make a difference to their local area through the use of mapping the applications of geographical information". They offer a range of online and offline mapping tools and geographical analysis to voluntary and community organisations and government bodies which help "in communicating local knowledge". Community mapping is used to capture and	Users are able to share their opinions and knowledge's regarding their community. Provides a great deal of information and analysis of what	

	visualize local knowledge in maps (paper and electronic) that provide a developing record of local priorities and aspirations. These maps list community facilities, videos, views of people, projects in development, events, landmarks and historical information.	exists in the area, and what people like and don't like. This is valuable for developing discussions from, but still puts the decision makers in control of what points to pick up.	
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Appendix C: Young Digital Citizenship (preliminary study)

Project outline from AirS and Community 21

Name of Organisation Action in rural Sussex

Type of organisation Charity

Provide a brief description of your organisation and its core activities (200 words max.)

AirS is an independent charity established in 1931 with the overall vision of 'Supporting a Living, Working Countryside. In its current Strategic Plan 2012 - 2017 AirS has identified 'support and services for young people as part of a living working countryside' as its main focus. This is in the context of its existing aims: - 1. To reduce the incidence and impact of disadvantage and poverty on people living in rural areas 2. To increase the capacity of rural communities to manage change for the benefit of all of their members 3. To inform and amplify the voice of rural communities to influence public policy. Our projects and programmes are built around ensuring local and effective delivery by qualified and expert staff working to community development principles. These projects could be directly for those who are disadvantaged or vulnerable for income, health or rural isolation reasons or equally could be supporting local voluntary and community organisations, including parish and town councils, who are active in improving the quality of life for local people. In the context of these applications the focus is on infrastructure support and advice, building the capacity of local volunteers and organisations and ensuring improved services and facilities in rural communities.

Project Details

What is the name of your project? Community 21

Please provide a brief summary of your project (50 words max.)

Rural young people will be supported and trained in the co-design, development and use of apps or similar so they can have a stake in the development of their communities under 'localism' The project will evaluate the different methodologies and formats used with a view to the apps being disseminated widely.

What need is your project looking to address? (100 words max.)

Rural young people are disadvantaged by their isolation and difficulty in accessing services particularly access for over 16s to college, training and / or employment opportunities but also to health and wellbeing services and facilities. Traditionally young people have often not been involved in service planning within their own communities in ways that encourage their interest and which would make a difference to their lives. This increases their isolation and means that their particular needs have not been identified in community plans.

How will your project address this need? (200 words max.)

Groups of young people will be supported and trained to develop and use innovative digital technologies so that they can improve how young people are involved in local decision making. This will in turn improve the quality and comprehensiveness of their Neighbourhood Plan. Young people from selected communities will receive training and work experience on aspects of community engagement, digital technologies and product design and development that as well as benefiting their local community will improve their options for education, training and work opportunities. Parts of the programme will be accredited and young people will develop their own skills portfolios

Who will benefit from your project? (100 words max.)

The beneficiaries will be: -

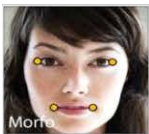




- Young people on the training programme who will improve their skills, experiences and life chances;
- Young people getting involved in community activities;
- Rural Communities undertaking a neighbourhood plan who will benefit from the involvement of more young people;
- Rural communities having the ability to engage with young people on an ongoing basis on a range of initiatives;
- AirS and University of Brighton by the development of apps that can be used more widely;
- Communities in general who wish to engage young people in their community engagement / neighbourhood plans processes.






How will people benefit directly or indirectly from your project? (200 words max.)

Direct: - The young people involved directly in the training and support programme will gain skills, knowledge and expertise that will help them with career and training choices and improve their individual employability. It will also provide them with a role within their community on which they can build. Some will get involved in the local delivery of services to young people and with local democratic processes and organisations. Young peoples' groups in the selected communities will benefit from the peer support and the experience of developing a local voice that as a result of the use of apps and digital and media technology allows them to express their views and identify potential solutions. The communities benefit from the young peoples' engagement by having a more comprehensive picture of local needs and by being able to demonstrate this in their Neighbourhood Plans Examination AirS and the University of Brighton benefit through the evaluation of the project in the identification and use of new technologies to engage young people on community planning exercises more broadly.

Indirect: - Rural communities in general will as a result have access to tools that can be used by young people and the wider community for similar exercises.

Appendix C: List of applications and their functions

Application	Description	Price	Device
Apps used in the workshops			
Morfo 	<p>Enables the user to transform either a photograph of someone or an inanimate object into a three dimensional, moving and speaking animation. One which they can control what is said by a voice recorder, and also add in certain emotions and effects.</p>	Free	
Aurasma 	<p>An augmented reality app that allows the user to assign objects (a trigger) with their own Auras. When a trigger is recognised through a device (ipad, iphone etc), it triggers the Aura, which can be a video/3d animation/3D object.</p> <p>These 'triggers' and Auras need to be assigned to a channel using the online Aurasma Studio software (www.aurasma.com).</p>	Free (for App)	
SimplyMpress 	<p>A graphic design app that allows the users to incorporate their own photos and graphics into their designs. Can be used to create cards, posters, T-shirt graphics, etc. Has a simple interface with easy to use image and text effects.</p> <p>The user can search images off the internet, use images stored on the device, or take photos from the devices camera. Then can alter the scale, opacity, angle, colour, effect and the order they appear on the page.</p>	£1.69	ipad/iphone/ (coming soon to android and windows)
Collage Painter 	<p>Allows the user to create a 'photoshopped' style of image. Using images from the device, the camera or the web - the user is able to manipulate and merge these images together. Suggested uses are 'photo mashups, cards, or decorate your house'.</p> <p>It works by having a base image 'canvas', that the user overlays other images on top of 'templates', then transfers selected areas of this image onto the base image.</p>	£1.69	ipad/ipadmini
Step 	<p>A stop motion application that allows the user to make animated GIFs and quicktime movies. The user can adjust the frame rate, exposer and time setting and with the option to preview and delete single frames from the sequences.</p>	Free	

<p>Videolicious</p> 	<p>A video creation app that allows the user to combine videos, photos, music and narration with a simple to use 'talk and tap' to line up voice over with the images. These videos can then be shared instantly via email, Facebook, Twitter or Youtube.</p>	<p>Free</p>	
<p>VidEditorFree</p> 	<p>A video editor app that allows the user to trim videos, merge them together, re-arrange videos or film additional video on the in-app camera. These videos can then be shared instantly via email, Facebook, Twitter or Youtube.</p>	<p>Free</p>	
<p>Sketchup</p> 	<p>Trimble SketchUp is a 3D modelling software that is downloadable application for PC's and Mac's. It has a simple interface that allows the user to create buildings, objects, neighbourhood layout or products. The 3D Warehouse feature enables the user to download prefabricated objects (e.g. furniture, cars, fixtures etc). The models made can be fully rendered and placed in Google Earth.</p>	<p>Free</p>	<p>Available on PC's or Macs only.</p>
<p>Lego Build w/chrome</p> 	<p>A virtual lego builder which allows the user to select an area of land (currently only been developed for Australia), then construct using a full selection of lego blocks any type of construction they wish to make. The same principles of using real lego, but in a virtual realm.</p>	<p>Free</p>	<p>Online software (not downloadable)</p>
<p>Aris</p> 	<p>An open-source platform that allows the users to create their own games and interactive stories to play, using GPS and QR codes. Creating a hybrid of virtual characters, items and media based in a physical space.</p>	<p>Free</p>	<p>To create - use online software via PC, Mac To play - download app onto ipad/iphone</p>

Appendix D: Preliminary study facilitator feedback - full

On Morfo:

Kelly Duggan (KD) (PhD Candidate, University of Brighton): *“The use of Morfo engaged the participants straight away, they found it easy to use, fun, amusing and entertaining. It allowed them to express their opinions without becoming self-conscious (as it was used in combination with the ageing app, or by animating a photo/inanimate object and altered the voice - it offered a level of anonymity). By making their face older, or by trying to express what they thought the views of someone else would be, required them to reflect on that person, or employ a level of empathy - which few of the other tools did. However, having the discussion prior to the creation phase (the introduction to the overview of the workshops and the 'Issues, tools and audience' boards) were vital as prompts to ensure that the videos produced had relevance.”*

Liz Allsobook (LA) (Youth Engagement Officer, Action in Rural Sussex): *“This is the only part of the sessions where we could say why the group was here and what we wanted to achieve from consultation (context) which I feel is needed in this type of session work to help re-focus the reason for developing an idea for the future or now. The speed at which the group could interact with the apps, overlay media and provide information and visions was an instant hit and easily adaptable to other uses. Not only is it a fun way of developing ideas, because of the lack of instruction needed the group were able to quite quickly build on ideas and comments they wanted to share and because of the anonymity of the final produce, were more open in their comments.”*

Nick Gant (NG) (Community 21, Course Leader University of Brighton): *“As with the school sessions the immediacy of results and accessibility of the platform meant Morfo has become a staple in our toolbox. The transferability to other things (buildings, post boxes etc.) as well as drawn or searched images mean that it is a very flexible means to 'characterise' and narrate different subjects. The output is instantly sharable and can interact on the same device with other apps such as Videolicious and Aurasma. The process adopted enabled the development of a range of characters who communicated the ideas and issues in interesting and funny ways. The use of characters helped to negate issues of embarrassment and the super imposition of the issue on a character allows anonymity.”*

Joshua Barnes (JB) (BA Graduate, University of Brighton): *“It is clear that the kids enjoyed using the Morfo (+ ageing app) and Aurasma. Both are actually fairly straight forward to use, and provide amusement for them while simultaneously forcing them to engage with more complex issues in a way they still find fun. Putting themselves into the shoes of others, or even their own but from a different perspective meant they tended to think beyond just wanting the new skate-park. Aurasma was a new technology to most of them and you could see their interest in it. It definitely engaged them through its 'magical' nature.”*

Joseph Palmer (JA) (BA Student, University of Brighton): *“It was interesting how seeing yourself transformed into an older person changed the actual perspective of the person. The ability to combine multiple layers of apps is also the success of these sessions as each step provides a new approach that further brings out insights.”*

Mood Boards (Physical and Digital)

KD: *“It was surprising how much the participants enjoyed the more traditional, physical process. It was an activity they all knew how to carry out instinctively. Limitations regarding the paper based process were that some participants struggled to find the images they wanted in the magazine and image selection provided. Limitations regarding the digital processes were that some participants became frustrated with apps (Collage painter) they were asked to use. Maybe because it was new and different to use than others, yet given more time to understand the interface, or clearer instructions may have*

improved their experience. The method also required them to reflect on the place they live, however asking them to visualise it's 'spirit of place' may have been too ambiguous to gain deeper insights. By asking a more specific request i.e. Create two posters promoting your town/village - one directed at young people, one directed at old people. This again would have required them to place themselves in someone else's shoes."

LA: *"This is a great group session, both digitally and physically as the members were able to talk about what they were doing and what they wanted to achieve. Although the group preferred the physical creation of their items, the digital ones were more expressive, as they could find items exactly what they wanted to share, as appose to trying to make what they had fit. I think more instruction may have been need to show how the apps worked which would have helped in their development of their ideas."*

JB: *"This was an interesting session to observe. The kids took very naturally to the more physical cut and paste methods of mood-boarding. This is perhaps because they have done similar things before, but also the tangible nature of cutting out magazine sections and sticking down on paper is much easier to build up and maybe more gratifying. There is however limited imagery which can lead to misrepresentations of exactly what they wish to communicate. The digital tools they found much harder to use. I think this is because there were so many to learn in such a short time. Some of the interfaces require a bit of technique/practise that they weren't able to achieve in the allocated time. Hence the kids would get bored by them, or stuck doing the same thing over and over again. There were few cases of kids fully understanding how to use one app to do something then transfer it across to another to be built on. Given a bit more time it would have been interesting to see how better they would have used the tech. Having the internet as a means to find images was useful for them (once they figured out how to do it). Both experiments had advantages and disadvantages."*

Model making (Physical and Digital)

KD: *"The initial creative process wasn't happening at the model making phase (physical or virtual), but during the facilitated discussions at the beginning of the session. These discussions were aided greatly by the use of the internet for example, allowing them to research sustainable housing. It appeared setting them the task of designing 'affordable sustainable housing' overwhelmed them slightly and they didn't feel they had the knowledge to do this. Once a design was sketched out (using pen and paper drawings) they were much more confident at making the clay models and drawing the design up on SketchUp. However, these were more communication tools - not creative. The limitations included one of the laptops crashed a few times causing one participant to have to re-start their virtual model from scratch."*

LA: *"The group were defiantly in 2 camps on this session, those that could and those that could not. Physical model creation sparked off some really creative ideas such as wind turbines in different colours to match surroundings, underwater cafes with water powered energy and bridges to join each side of the river. By having the physical model in front of the group, they could see where gaps maybe were and what space was available. The members of the group who preferred the digital modelling, were those members who had more experience of how to use it and although had a blank canvass on what they could create, this was a session that required more support to in how to technically create their model or vision and meant some of them quickly lost interest. Those that were keen and able defiantly were able to create more interactive structures with particular requirements."*

NG: *"The reinforcement of the fact that the tools in and of themselves do not result in a meaningful outcome - A key aspect of the learning for me is how best to facilitate the 'deeper' reflections or catalyse 'creative' and critical thinking. So overcoming 'skate park syndrome' or just having fun with something. This session highlighted this again - they enjoyed both activities and mediums to a greater or lesser*

degree - but the issue was how to facilitate deep, creative thinking about the problem in the first place. Neither process did that - it required us to engage them in 'designing'."

Holly: "I only worked with one participant and she was fully engaged with google sketch up. It was a great way to quickly visualise their ideas about the community. She picked it up quickly and the outcomes were professional and clear to what she wanted to put across. With the assistance of this tool she developed her idea through it."

Storyboarding and Aris Gaming

KD: "Due to the basic interface of ARIS, I don't think the participants initially found it that appealing or engaging. However, its ability to tie the physical world with the digital world holds great potential. Maybe if a game had been developed in advance around the North Street Estate, and the participant's introduction to the software was by way of a game/treasure hunt/race then they may have been more intrigued into how to create their own version (?) The story telling was an activity the participants appeared to enjoy and engage with, however it could have been directed more around the issues and ideas spoken about in previous sessions, as it stood, novelty overtook purposefulness".

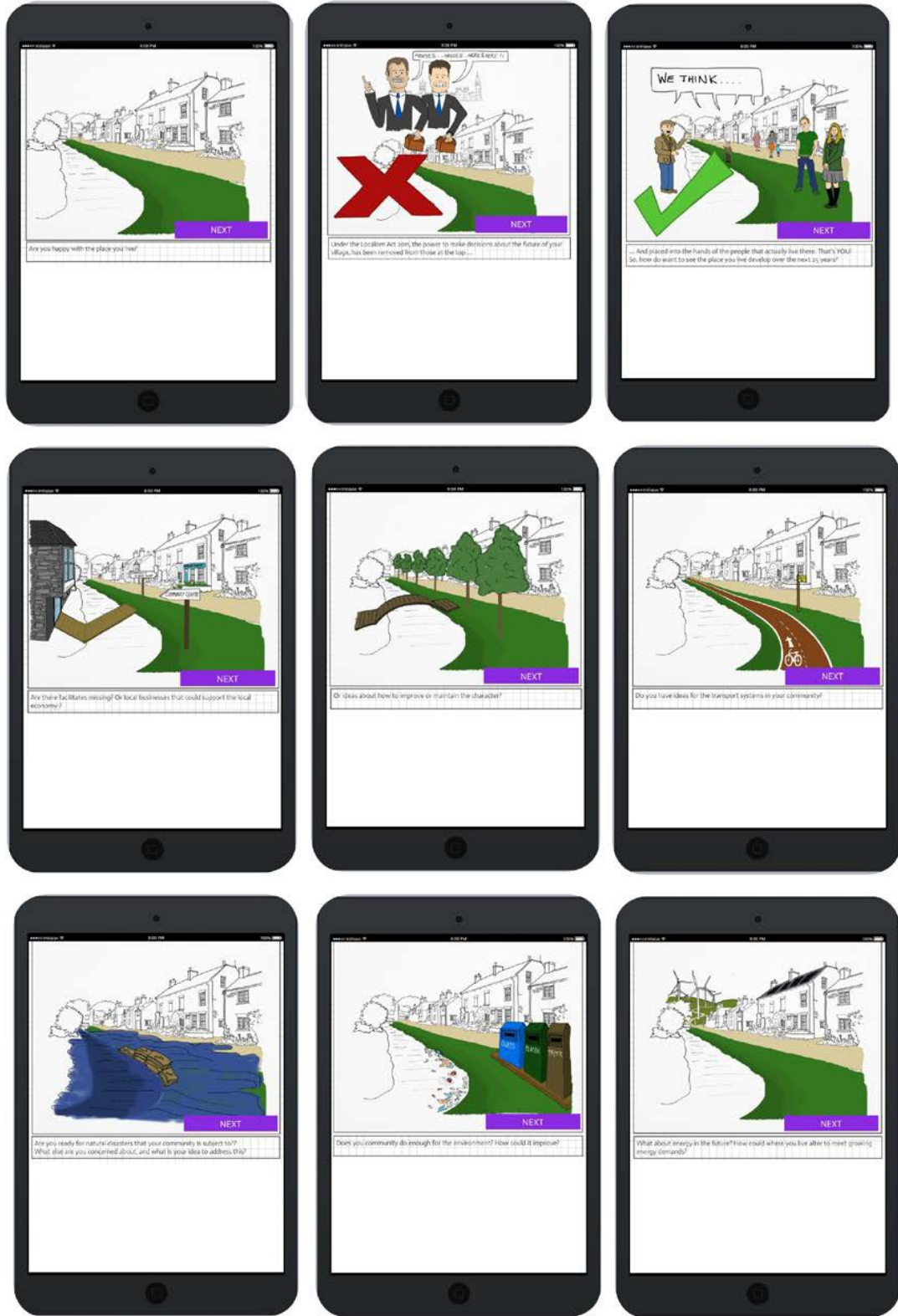
LA: "I felt the group needed much more instruction about ARIS and how it could be used. Trying to keep the group focused was a struggle and there were lots of distractions. Although the group understood that this was a way of "Gaming a Story" they struggled with the interface and were more keen in challenging and being controversial or creating a story which was interesting as appose to relevant to their brief, such as wanting to explode a duck as appose to visioning the future of the Pells area."

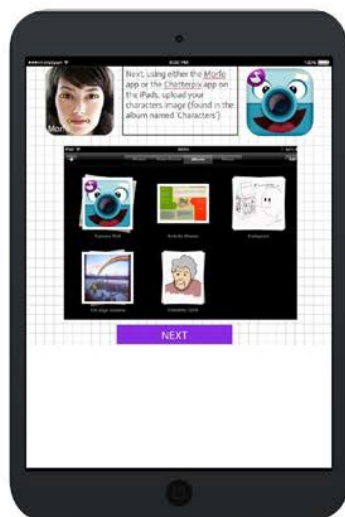
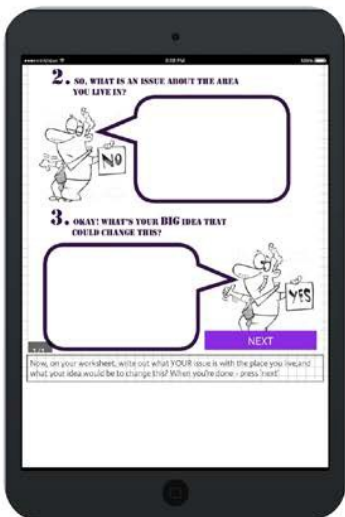
JB: "By now the kids were pretty proficient in using Morfo, which was useful for this task. Giving the kids the challenge of coming up with stories and games really got their creative juices going!! However, the stories mainly tended to involve large scale explosions and capital punishment. It was nonetheless great to see their enthusiasm to be creative in this way, but it was a challenge to focus their attention to more serious matters at times. Again, I would be interested to see what they would have come up with when given a bit more time to learn the ARIS interface and spend longer on planning the stories/games."

HA: "This was a rewarding session as the storytelling was a creative communication tool for the participants to engage in. ARIS was great for being able to link their stories and ideas to physical space on a virtual map. To then go and find it was also a key element to this exercise. It meant they could see it in 'real space' as well as being a fun exercise they were keen to get involved with. This exercise didn't take a lot of encouragement for them to get involved with and to create ideas around. They also saw the potential in future games they could create. However, it did take more knowledge about the device than some of the other apps."

JP: "ARIS provides a great zoomed out approach to community as it allows you to interact directly with the community and change it digitally, however, I feel that it is still in beta rather than being a fully polished interface that is easy and appealing to use. However, maybe Geocaching is an alternative?"

Appendix E: Animation/App for explaining context of Neighborhood planning to young people

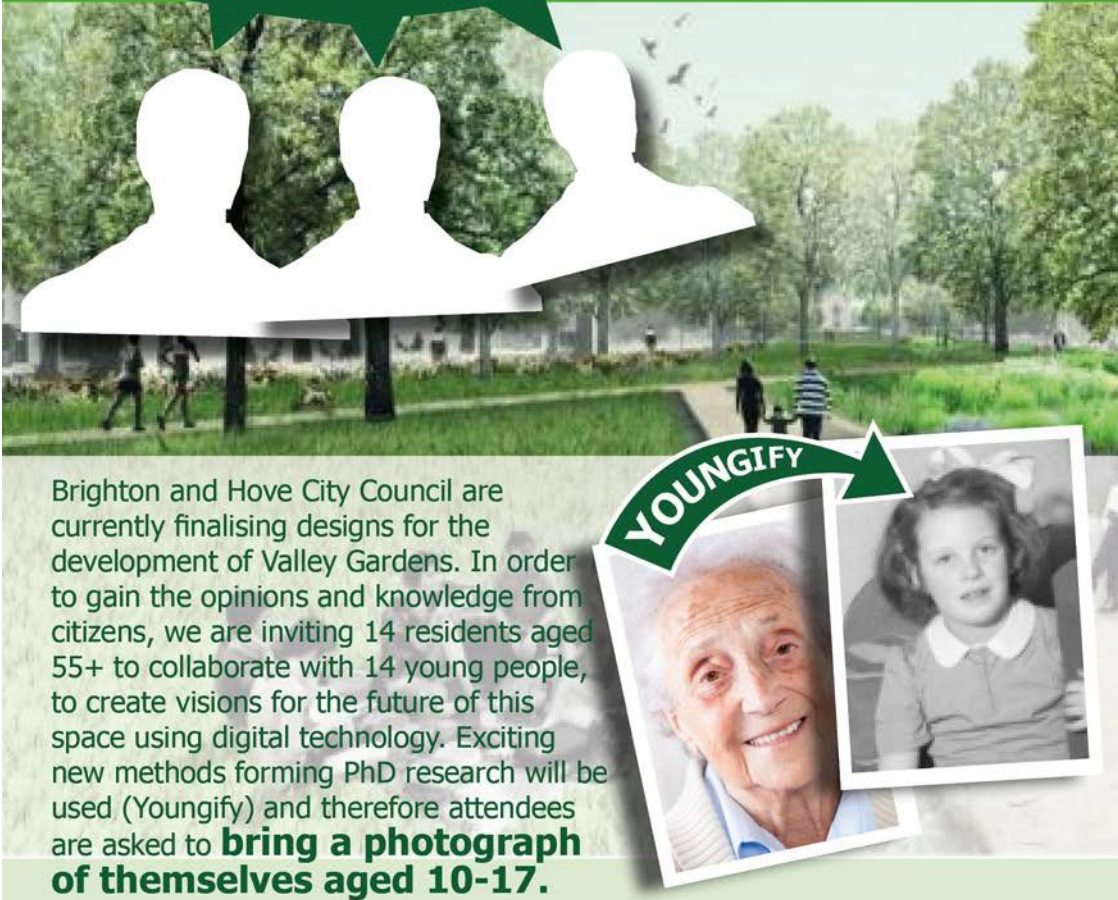




Appendix F: Leaflet disseminated across Brighton (physically and digitally)

FRIDAY 29th MAY, 10:30 to 14:00
UNIVERSITY OF BRIGHTON, GRANDPARADE
PLEASE MEET IN THE FOYER

ENVISIONING VALLEY GARDENS WORKSHOP



Brighton and Hove City Council are currently finalising designs for the development of Valley Gardens. In order to gain the opinions and knowledge from citizens, we are inviting 14 residents aged 55+ to collaborate with 14 young people, to create visions for the future of this space using digital technology. Exciting new methods forming PhD research will be used (Youngify) and therefore attendees are asked to **bring a photograph of themselves aged 10-17.**

**If you wish to attend or have questions please contact Kelly
07973965446 or kd135@uni.brighton.ac.uk**

Appendix G: Feedback from workshop participants (workshop 4)

Young people Day 1

Feedback young people Valley Gardens Session 2 Day 1

Name	Age	Enjoyed Most	Why	Enjoyed least	Why	Morfo better than paper	Big issue/idea change? How	Minecraft better?	Participate again?
Jack	8.5	The Minecraft	Because we got to build		I enjoyed all the activities	Yes, because we did not do writing	No (it did)	Yes because you get to build and if you do not like it, start again	
Ethan	9	Minecraft	Because I got to put my idea into a game	Tablet app	Because you did not have to do that much		Yes, it was not going to have the security	Yes, it is like you are in it and now how it would look	Yes – it was fun
Helena	12	I liked the building activities the most	Partly because I really enjoy gaming, but also because I could show my ideas in a 3D way, as well as explaining them.	I didn't NOT enjoy anything, but I enjoyed the activity where we looked at ideas from other people/things perspective [least]	Because I couldn't be completely certain on what to build	-	No (it did)	Yes, because you can go more in depth and show what you mean more than just in a '2D' kind of way, even if you are a good drawer	Yes, I found it really fun and creative
Toby	13	Minecraft	Because it is Minecraft	Writing down the treasures – trash		Yes, because it was fun and easy		Yes, because it's fun, fast and easy	Yes, because its fabulous
Leela	10	At the start, labelling the good and bad		Sharing our ideas in front of everyone		Paper – because it is not as confusing	Yes, because I did not care about me, I cared about them	Yes, because you can get your ideas done	Yes, because it was creative (comment – I think you should do it more common)
Jamie	9	I like building	Because it's fun	This	Because its writing	Yes, its tech	Yes	Yes, it's easy	Yes, it's amazing
Alex	10	I enjoyed the game bit the most	Because I love gaming because your free to do anything	I least enjoyed the bit where we were flagging a map	Because I came here with ideas to build		Yes, I was going to build a cyber-dog or a house because I	Yes, it's better to just build I think, and have a 3D perspective of it then doing multiple drawings	Yes, because it involves Minecraft

Young people Day 1 cont...

Nathan	10.5	Minecraft	We got to build things	When we did the flag activity	Because my flags broke		thought the place we were designing was a village with houses and stuff	Yes, it's boring drawing	Yes, it was fun [comment: allow us to do /givecamincraft:head[owner: (usernameofplayer)] because it gives you the players head
Isaac	12	Building on Minecraft	Because I love building	The first one	Because I did not know what to write		Yes, because having a skate park would annoy old people	Yes, because you have fun doing it	Yes, because it's fun
Ella	11	I enjoyed building for the community	Because I LOVE MINECRAFT	I least enjoyed the flags	Because sometimes it was hard to think of things		Yes, because it thought about other people and how they would feel about things	Yes, because it's very easy to pick up and it is REALLY FUN	Yes, because it is very fun and EPIC
Jude	14	Minecraft building		Map thing		Yes, as it moved	No	Yes, its 3D and easier	Yes, it was fun
Cara	13	Minecraft	Because I enjoy making things	The first activity	Because I didn't really understand it	Because you could imagine yourself as someone else a lot easier	No	Yes, because it was more accurate and 3D	Yes, it was fun
Skye	12	Showing our buildings	Because it was amazing seeing other people's ideas	The flags	Because I didn't think it was fun	I think paper was better as you had more time for details	No (yes crossed out)	Yes, because you can see how it would look like	Yes, I would because it was very fun

Young people Day 2

Name	Age	Enjoyed the most	Why	Enjoyed least	Why	Ageing & Morfo better than paper	Did big issue and idea change? How?	Worked in pair – did big issue and idea change – how?	Other comments
Nathan	10.5	Minecraft	Because it is a video game	Old morfo	Because it made me look ugly	Yes, because it was more fun	Yes – I thought more about wildlife	No	Isaac wouldn't let me do anything in the last 5 minutes, but that's a personality thing
Toby	13	Minecraft	It was very fun	Writing this sheet			Yes – the idea of the tea room		
Cara	13	Minecraft	It was fun	Coming up with ideas with the group		-	No (they did)		
Ella	11	I really enjoyed talking about and designing the park	-	NOTHING	-	Yes, because it is more accurate and easier	Yes – I thought they might not want to skate board or graffiti	I don't think it would	Not really
Jack	8	Minecraft	because it was fun	The sheet	Because I hate writing				
Jamie	9	Minecraft	Its Minecraft	People breaking MY stuff			No (it did)		
Ethan	9	Minecraft	Coz I just did	This			Yes. Just yes	Not that much. I did work with an older	No
Skye	12	Minecraft	Because we were working as a group	The age app stuff	Because I looked horrible	No, because you can say more on paper		no	no
Isaac	12	Building in Minecraft		The iPad	Because it's not as fun	Yes, because it's on an iPad	No (it did)		
Alex	10	Building	Because half of the group all worked together and it looks really good	I didn't not enjoy anything	Because it was so good	Yes, because it's more fun	No (it did)	It wouldn't	No
Leela	10	Minecraft	Because it was creative	Writing		Yes		Maybe a bit more	no
???		Minecraft	Coz it was fun	Writing this sheet	As it is boring		No (it did)		I am a red stone cog

Feedback form Valley Gardens session 2 Day 2 – Over 55s

Name	Most useful	Why	Least useful	Why?	Use morfo? Useful?	Big ideas changed?	Working with young change perspective	Minecraft useful tool?	Would you participate again?
Lynne (64) OP1	Current versus proposed: likes/dislikes		Photo	Not sure it added anything	No – watched the kids No idea development, not more useful, just a game	No – my values and priorities have been pretty consistent throughout my life. I am now aware of older people's needs.	No – we shared many views, ideas	Ok!	Yes
Sally OP2	Getting involved with the kids		Sticking on the flags	Confusing but I understood why it was suggested	Yes – it is their world and they are so confident with technology	Yes – because they were not constrained by the things I thought of	Yes	Yes	Yes
Chris OP3	1. Comparing existing and proposed designs 2. Criticising artists idealistic impressions alongside deliberately drab photos				no	No, because the young person's here were not using the app in a constructive or controlled manner. There was too much random work. Little thought.	No, because the young people were working too fast and using the app like a computer game	No, because there are too many random ideas that get discarded too quickly. No consideration thought or evaluation.	possibly
Val OP4	Valley gardens form 'issues and ideas' and discussion with other older people				Yes. Good idea (see above)	No	Didn't do this really		yes
Jax OP5	Looking through before and after photos and sketches	Shows how realism is dispensed with and idealism takes its place. All before pictures are dull, taken from bad angles, features in new are not truly replicated i.e. all houses are bright white. It's all false.	Morfo	(was fun though)	Yes (used it)	No	Slightly	Not sure, I think maybe yes... can be built upon and changed easily	yes

Appendix H Ethics approval and consent forms

University of Brighton Ethics Committee – March 2013

Title of Project:

Nominet / Community 21 – “Digital Citizenship and Co-Design” -

Researcher: Nick Gant

Supervisor / Co-researcher:

Kelly Duggan (PHD) / Cathy Grundy (PHD) / James McAdam

Telephone: 01273 644726

Faculty: Faculty of Arts and Architecture, University of Brighton, Grand Parade, Brighton.

Financial Sponsorship:

Nominet Trust award (£100k) and AHRC Funded Collaborative Doctoral Award (£55k).

Both are in collaboration with Action In Rural Sussex (AIRS) as a formal University partner.

Timescale of research project:

Nominet Feb 2013 – June 2014 as part of PHD (Jan 2013 – Dec 2015). Commencement of school engagements is from June 2013.

1. The proposed participants

School children (age group 11 – 18) and University students (UG/PG)

The participating group(s) will be supervised by their normal teaching staff and the researcher will be supervised by staff supervisor (co-researcher) and colleagues from AIRS. Consent and ethical processes will include the protocols of the participating schools and those of Action In Rural Sussex who lead the engagement and in effect invite UOB to participate in.

The age group of the participants means that they are able to comment and make rational judgment as to whether they wish to participate or not in the group participation, co-design and digital workshops. Parental consent would also be required and a consent form is attached appendix 3 – However, the Schools in question have already received parental consent for this type of activity and do not consider it necessary to request further, special, consent.

The workshops are all planned in consultation with staff at the participating schools including the headmaster.

2. Rationale, aims and methods.

The engagements that will take place between UOB students and staff, AIRS staff and teenage school students. The aim of which is to form a reciprocal dialogue and learning process to help form new knowledge about how best to empower young people to have a say in the design and development of their neighbourhood, enabled via the use of accessible technology.

The process involves the testing and use of predetermined communication tools and methods and the co-design of new tools that utilise the experiences and ideas of young people. This will help in development of a toolkit for communities that wish to meaningfully engage young citizens in local, participatory planning by using everyday technology.

Children will work alongside our students in assessing how best to creatively fulfill a number of critical reflection and communication tasks e.g. identifying what their neighbourhood may need to be sustainable and resilient in the future. They will then test ways of communicating their interpretations and ideas about this using available technology e.g. augmented reality and geo-tagging, photo manipulation, computer aided modeling and vlogging.

It is anticipated that the outcome of the research will be practical case studies, qualitative data and feedback from the participants and staff and co-devised ideas and methods for future application in new 'app' development and / or toolkit construction. The pupils and students will also receive accreditation for their use of technology within the context of community planning and design (as part of citizenship curriculum).

3. Location of the research

The engagement workshop will take place in the participant's normal classroom at the participating schools (Lewes Priory and Chailey School). There may also be cause to visit the neighbourhoods of the participants to contextualise and test geo-based technologies and gather spatial reference material, but these would be led by the school.

4. Informed consent.

The school will receive an introduction description of the project which includes a proposed project introduction sheet and video ([video link](#)), this can be used to introduce and propose the session with the prospective participants. They will also receive a copy of this application (if approved). The project will utilize and adopt the school's own protocols

for consensual participation as well as providing the university's consent forms for completion in advance. (Appendix 2 and 3). This will ensure parental consent is sought. The researchers will visit the school in advance and meet the participants and their supervising staff to introduce the project and answer any questions. Consent will be required to use video and photo based material that may include pupils on publically accessible interfaces (e.g. you-tube / community21.org etc.).

5. Health and Safety

The researchers do not deem any of the aspects of the workshop to be of significant risk. Participation in using software and in creative workshops would conform to normal activities in a school. If children are to be re-located to neighbourhood contexts, this will be supervised using the school's procedures for 'study-trips' and the research team will also risk assess the excursion based on the location as they are identified.

Researchers (and students) will not be left or asked to undertake one-to-one supervision of young people nor will they supervise external excursions from school-premises, will only be in contact with participants for limited periods and therefore do not need to have formal, criminal background checks.

6. Impact of the research

The research will be used to develop a toolbox of 'apps' and methods that will be publically accessible and for communities to use whilst participating in statutory and community-led planning. The project builds into new and emerging processes of participatory planning under new 'Localism' legislation (Department of Communities and Local Government / DCLG 2012 and National Planning Policy Framework 2012). It will provide practical tools and new knowledge of how to engage and enable often-disenfranchised young people in their new rights to have a voice within democratic and participatory planning. The tool will be available on the Community21 website (link to [community21](http://community21.org)) which is a University partnership project with Action in Rural Sussex (AIRS). AIRS will be using this tool in all future community plans across East and West Sussex and through the Rural Community Council Action Network by other county agencies across the UK. It will feed into planning policy conferences and seminars including governmental representatives and into PHD thesis, papers and book chapters. Previous work in this vein 'Future Village' (Gant et al 2011) has been demonstrated to government ministers (DCLG, Cabinet Office and DECC), The National Rural Community Council Fieldworkers Conference and at the Rural Commission.



7. Confidentiality and Intellectual property.



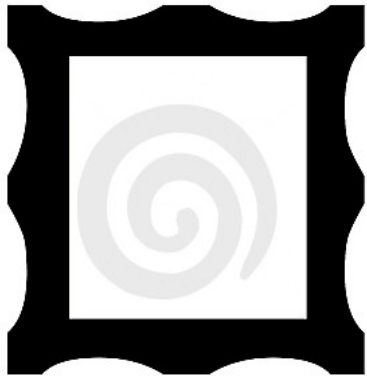
Pupils and students will feature in video and photo evidence and outputs from the project, but they will not be named. Any intellectual property generated at the event resides with the researchers in agreement with the school – who will be credited for their input and will receive student accreditation for work generated by the pupils. University students will aid in the project and be credited via the optional unit / module in 'Community



participation via live projects’.

Project Introduction sheet.

“Digital citizenship and co-design” creative workshop

	<p>My name is Nick Gant.</p> <p>I am a lecturer at the University of Brighton in the area of design. The staff and students involved in this project with you are researching issues around how to get young people interested and participating in the design of their neighbourhood in the future.</p> <p>This video should help explain the project video link</p>
	<p>What we want to do is involve you in a creative workshop. This will be a fun way to help us and you learn about what technologies and ‘apps’ are available and are useful in enabling you and other young to express and communicate ideas about how you think your community should be in the future.</p> <p>This will involve thinking creatively about what your community should be like in the future. You will then use technology to promote and share your ideas you’re your community through digital technology – this may include computer aided design (CAD), augmented reality (AR) and geo-tagging, use of content management systems (CMS) and social media (you-tube / community21.org).</p> <p>The workshop will lead to the creation of new apps and a toolbox of skills and processes that will</p>

	<p>help other communities to get young people involved community development.</p> <p>We also hope to be able to credit you with a formal certificate of competence if you participate in enough aspects of the project and fulfil some learning criteria.</p>
	<p>We would like to take pictures and create video as part of the project – which we hope you will help us with and may feature in. We will also require you to take video footage of your own.</p> <p>If you are not happy with this you can tell us so that we do not photograph or video you.</p>
	<p>We would like to show these pictures in an exhibition to the public and put them on our website, on the private (not public) Facebook page of the project and on the website of the University of Brighton. We will not use your names or any private information about you in the exhibition or on the website.</p> <p>We will invite students and parents to view material before it is made publically available.</p>

	<p>If at any point you do not want to continue participating in the project – you can stop.</p>
	<p>If you have any questions about the workshop or project you can ask a member of staff or Nick or Liz.</p> <p>Contact Details:</p> <p>Liz Allsobrook, Action in Rural Sussex. 01273 473 442 07825 506667 Liz.Allsobrook@ruralsussex.org.uk</p> <p>Nick Gant, University of Brighton. 01273 644726 / 07961 372369 n.a.gant@brighton.ac.uk</p> <p>Kelly Duggan, University of Brighton K.Duggan1@uni.brighton.ac.uk</p> <p>Cathy Grundy, University of Brighton c.grundy@sussex.ac.uk</p> <p>James McAdam, University of Brighton J.Mcadam@brighton.ac.uk</p>

Participant's Consent Form

Participant Consent to Take Part

Please put a circle around your answer to all the questions. This will let us know whether you want to take part in the project and that you know what is involved.

1. I agree to take part in the research project and the activities in the timetable.

Yes No

2. I have been given a copy of the Project Information Sheet and have asked any questions about the project so that I can take part in the session.

Yes No

4. I have met the lead researchers I will be working with Nick Gant and Liz Allsobrook, and we have talked about the project together.

Yes No

When signing this form I can still make the decision to stop coming to the project at any time.

Film, photographs, information and artwork

This project will be recorded and shown to other people.

The people who will use this information are Nick Gant and Action in Rural Sussex student and staff member on the 3D Design course at the University of Brighton. They will show you a copy of this information before it is shown to other people.

Please put a circle around the word YES or NO to describe your choice to each question

Photography and artwork

I agree to the research sessions I take part in being filmed and or photographed.

Yes No

I agree for photographs or film footage of me to be used in publicity that will be seen by other people and the public. This would include websites including our Community21 / University of Brighton / Action in Rural Sussex / Nominet (the project funders), on our You-tube channel and our private Facebook page, reports and research papers and exhibitions.

Yes No

Artwork

I agree to any artwork or diagrams that are produced to be used in an exhibition for the project

Yes No

Signed..... Date.....

Name.....

Witnessed by Nick Gant Signed.....Date.....

Appendix 3. Parental Consent Form

Participant Consent to Take Part

Please put a circle around your answer to all the questions. This will let us know whether you are happy for your child to take part in the project and that you know what is involved.

1. I agree for my child to take part in the research project and the activities in the timetable.

Yes No

2. I have been given a copy of the Project Information Sheet that has also been provided to the children.

Yes No

Film, photographs, information and artwork

This project will be recorded and shown to other people.

The people who will use this information are The University of Brighton and Action in Rural Sussex. They will invite parents to see show this information before it is shown to other people.

Please put a circle around the word YES or NO to describe your choice to each question

Photography and artwork

I agree to the sessions that my child participates in to be filmed and or photographed.

Yes No

I agree for photographs or film footage of my child to be used in publicity that will be seen by other people and the public. This would include websites including our Community21 / University of Brighton / Action in Rural Sussex / Nominet (the project funders), on our You-tube channel and our private Facebook page, reports and research papers and exhibitions.

Yes No

Signed..... Date.....

Name.....

Name of son or daughter.....

Witnessed by Nick Gant Signed.....Date.....